REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF CONSTRUCTION
DEPARTMENT OF BRIDGE

DETAILED DESIGN STUDY ON THE BAGO RIVER BRIDGE CONSTRUCTION PROJECT

FINAL REPORT ATTACHMENTS

VOLUME IV COST ESTIMATE REPORT

DECEMBER 2017

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NIPPON KOEI CO., LTD.
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
METROPOLITAN EXPRESSWAY COMPANY LIMITED.
CHODAI CO., LTD.
NIPPON ENGINEERING CONSULTANTS CO., LTD.

EI
CR(3)
17-136

REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF CONSTRUCTION
DEPARTMENT OF BRIDGE

DETAILED DESIGN STUDY ON THE BAGO RIVER BRIDGE CONSTRUCTION PROJECT

FINAL REPORT ATTACHMENTS

VOLUME IV COST ESTIMATE REPORT

DECEMBER 2017

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NIPPON KOEI CO., LTD.
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
METROPOLITAN EXPRESSWAY COMPANY LIMITED.
CHODAI CO., LTD.
NIPPON ENGINEERING CONSULTANTS CO., LTD.

PART 1

PACKAGE 1 & PACKAGE 2

Myanmar

Detailed Design Study on Bago River Bridge Construction Project

Project Cost Estimate (Package 1 and 2)

CHAPTER 1. COST ESTIMATE METHOD & CONDITIONS

1.1 THE POLICY OF COST ESTIMATE

The construction cost is estimated in accordance with Japanese guideline and standard(specifically as shown Table 1.1.1), because there is no cost estimate standard for bridge work in Myanmar. New standards have a priority to be used, but some work items refer to conventional standards.

Table 1.1.1 Applied Standard and Manual for Cost Estimate

Japanese International Cooperation Agency(JICA)
- Preparatory Survey for Grant Aid / Design and Cost Estimate Manual(Civil Engineering), 2016 - Preparatory Survey for Grant Aid / Design and Cost Estimate Manual(Equipment Procurement), 2016 - Preliminary Project Cost Estimate Guideline, 2008
Construction Research Institute
- Cost Estimate Standard for Civil Works(MLIT), 2016, 2013, 2012, 2011 - Cost Estimate Standard for Civil Works(MOC), 2000, 1999, 1993, 1992 - Cost Estimate Standard for Port Civil Works(MLIT), 2016 - Standard Specification of Cost Estimate for Civil Works(MLIT), 2016 - Construction Material Cost, April, 2017
Japan Construction Machinery and Construction Association
- Construction Equipment Depreciation Calculation, 2016 - Bridge Erection Works Cost Estimation, 2016

Source: JICA Study Team

1.2 COST ESTIMATE BASE TIME

This project cost estimation was executed in May 2017.

1.3 CURRENCY EXCHANGE RATE

Applied currencies are Myanmar Kyat(MMK) as local portion, Japanese Yen(JPY) as main currency, US Dollar(USD) as foreign portion from other countries except for Japan. According to JICA guideline, USD to JPY exchange rate is based on TTS exchange rate of “The Bank of Tokyo-Mitsubishi UFJ Ltd” and USD to Myanmar exchange rate was applied based on “The Central Bank of Myanmar”. The applied exchange rates for this cost estimate was the last three months average rate from 1st Feb. to 30th April in 2017 as shown in Table 1.3.1.

Table 1.3.1 Applied Exchange Rates

Currency	Exchange Rate
US Dollar(USD)	1 USD = 113.11 JPY 1 USD = 1358 MMK
Local Currency: Myanmar Kyat(MMK)	1 MMK = 0.0832 JPY

Source: JICA Study Team

1.4 DIRECT CONSTRUCTION COST FACTOR

1.4.1 Labor Cost

Every labor cost was collected in Myanmar by inquiring of contractors. Mainly labors are Myanmar citizen. Organizers and specialists from other countries cost is calculated in “site expense”, not in every summation sheet.

1.4.2 Lease cost of Construction Equipment

Every ordinal construction equipment cost is collected in Myanmar by inquiring of machine lease companies.

Heavy equipment cost is applied based on "Construction Equipment Depreciation Calculation, 2016". For heavy equipment from other countries, shipping cost is estimated by inquiring of freight company.

1.4.3 Material Cost

Every material cost was collected in Myanmar by inquiring of suppliers. Also, special material and product's, hardly to be obtained in local market, unit rates are estimated based on inquiring and "Construction Material Cost, April, 2017".

1.4.4 Productivity Correction Coefficient

In this study, mainly Japanese cost estimate standard was applied. So productivity of labor and equipment were corrected according to JICA manual "Preparatory Survey for Grant Aid / Design and Cost Estimate Manual(Civil Engineering), 2016" as shown in Table 1.4.1

Table 1.4.1 Productivity Correction Coefficient (for Asia region)

Correction Type	Coefficient
Correction Coefficient for Simple Workers	1.5
Correction Coefficient for Technical Workers	2.5
Correction Coefficient for Simple Equipment	85%
Correction Coefficient for General Equipment	75%

Source: JICA Study Team

1.5 CONSTRUCTION SCHEDULE CONDITIONS

1.5.1 Rainy Season and Workable Day

Myanmar has a tropical monsoon climate. As winter ends, warm and moist air from the Indian Ocean is carried by southwest wind promoting a large amount of rain during the rainy period. During the dry season, there is clear weather for several days until the end of April. For schedulepurposes, the rainy season was set up from June to August.

Working days correction coefficient takes in consideration the number of days stopped due to weekends, holidays and adverse weather conditions – such as heavy rainfall. Considering the rainfall volume and others factors, this project was classified as a "General Construction Works". According to JICA manual was applied the correction value of 1.35 to estimate each activity duration. Also, it was assumed that all works except earthworks activities could be done during the rainy season from June to August.

1.6 INDIRECT CONSTRUCTION COST FACTOR

Mainly indirect construction cost is classified into 3 part, Site expenses(Site management cost), General temporary work cost, and Overhead cost. Those indirect construction costs are estimated according to MLIT standard and JICA guide lines.

1.6.1 Site Expenses(Site management cost)

Site expenses(Site management cost) is estimated with summation method classified as 16 items as shown in Table 1.6.1.

Table 1.6.1 Site Expenses Items (Site management cost)

Item	Reference source
01) Supervision Personal Cost	Calculated based on supervision MM and JICA Unit Price
02) Safety Training Cost	Safety Manager MM was added in Construction Schedule
03) Tax & Duties	Permanent Assets Tax≒0 (Site Office), Car Tax≒0 (Rental)
04) Construction Insurance	Contract Work Price × Insurance Fee (0.5%)
05) Employee Allowances	Included in JICA Unit Price, 2017
06) Retirement Allowance	Included in JICA Unit Price, 2017
07) Legal Welfare Expenses	Included in JICA Unit Price, 2017
08) Employee Benefit Expenses	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual(Equipment Procurement), 2016 P.46
09) Office Supply Cost	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.47
10) Telecommunication Cost	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.47
11) Social Expenses	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.49
12) Compensation Cost	Calculated in separated
13) Specialized Subcontractor Cost	None
14) Construction Registration Cost	None
15) Utilities Cost	Water = Water well, Gas = None, Electricity = Generator
16) Miscellaneous	AIDS prevention campaign etc.

Source: JICA Study Team

1.7 PRICE ESCALATION

Price escalation ratio for every currency was estimated in accordance with “Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Civil engineering)”. Base data are from “International Monetary Fund”. Applied ratio is shown in Table 1.7.1. This ratio is considered the duration from cost estimate base date(May,2017) to Construction midpoint(Nov., 2019).

Table 1.7.1 Estimated Price Escalation Ratio

Currency	Ratio
Foreign Currency: US Dollar(USD)	6.412 %
Local Currency: Myanmar Kyat(MMK)	14.524 %
Main Currency: Japanese Yen(JPY)	3.434 %

Source: JICA Study Team(based on IMF data)

1.8 PHYSICAL CONTINGENCY

The amount as same as the feasibility study is into calculation.

Table 1.8.1 Physical Contingency Amount

Currency	Amount(mil.)
Foreign Currency: US Dollar(USD)	-
Local Currency: Myanmar Kyat(MMK)	10,962
Main Currency: Japanese Yen(JPY)	1,777
Total(Converted to JPY)	2,689

Source: JICA Study Team

1.9 CONSULTANT SERVICE

The amount as same as the feasibility study is into calculation.

Table 1.9.1 Consultant Service Amount

Currency	Amount(mil.)
Foreign Currency: US Dollar(USD)	-
Local Currency: Myanmar Kyat(MMK)	2,811
Main Currency: Japanese Yen(JPY)	1,195
Total(Converted to JPY)	1,429

Source: JICA Study Team

1.10 DISPUTE BOARD COST (ELIGIBLE & NON-ELIGIBLE PORTION)

Dispute board shall be set for every package. The cost is mainly going to be separated into Eligible & Non-Eligible portion, the ratio is 50:50.

Table 1.10.1 Dispute Board Cost

Currency	Amount			Total
	Package 1	Package 2	Package 3	
Total (Converted to JPY)	140,069,000	140,069,000	118,368,000	398,506,000
Eligible Portion (Converted to JPY)	70,034,500	70,034,500	59,184,000	199,253,000

Source: JICA Study Team

1.11 TAX (NON-ELIGIBLE PORTION)

Taxation is owned by government (Non-eligible portion). Mainly “Commercial tax: 5% for total project cost”, “Import tax: 5% for foreign portion”

1.12 INTEREST DURING CONSTRUCTION (NON-ELIGIBLE PORTION)

The ratio is applied as same as the feasibility study.

- 0.01 % for construction
- 0.01 % for consultant

CHAPTER 2. PROCUREMENT PLAN

2.1 CONSTRUCTION MATERIAL

Major construction material procurement plan, origin country, is shown in Table 2.1.1.

Table 2.1.1 Major Construction Material and Product Procurement

Description	Myanmar	Japan	Other	Remarks
Steel Material for Superstructure		○		Raw material
Cable Material for Cable Stayed Bridge		○		
Miscellaneous Steel Products	○			Catch basin, rail
Steel Pipe Sheet Pile			○	From Vietnam
Stud for SPSP and Equipment		○		Product needs special procedure
Reinforcement Bar		○		
PC strands, and other material for PC		○		
Concrete	○			
Cement	○			
Aggregate	○			Based on material survey result
Bearing		○	○	From JP for Cable stayed bridge
Expansion Joint		○		
Road Bed Material	○			Based on material survey result
Asphalt Concrete	○			
Asphalt Concrete for Steel Deck		○		
Borrow Material	○			Based on material survey result
Flap Gate		○		
Toll Plaza Facility	○			
Road Lightning	○			
Traffic Signal	○			
Electrical Products(Cable Stayed Bridge)	○	○	○	

Source: JICA Study Team

2.1.1 Steel Product

2.1.1.1 Capacity of Steel Fabricators

In the procurement plan, mainly raw steel material was expected from Japan based on inquiring of supplier. Major steel fabricators are identified located in South East Asia countries, such as Myanmar and Vietnam. Actually, only local Myanmar fabricators are not able to supply all steel products because huge amount of steel products is expected in the project. From other countries including Japan, many factories productivity shall dedicate for continuous sufficient steel production supply to the project.

2.1.1.2 Pricing of Steel Girder Fabrication

In order to decide Study team's price for steel girder fabrications, quotation from 3 fabricators, factories located in Myanmar and Vietnam, were obtained. Generally, the fabrication cost in Myanmar, local price, shall be reasonable comparing to other countries fabricators. However, fabricators other countries also have very competitive potential. In this cost estimation, the lowest quotation price was summed. Competition of steel girder fabrication cost, in other word widely open bidding, is strongly expected as most dominant factor for appropriate bidding price.

2.1.1.3 Pricing of Other Steel Fabrication

(1) Steel Pipe Sheet Pile

Steel pipes for Steel Pipe Sheet Pile Foundation are difficult to be fabricated in Myanmar due to shaping, rolling steel plate to be pipe shape. Vietnam and Japan are considered as major possible origin country. In this study, quotations from 2 fabricators in Vietnam were obtained. Vietnamese price was applied into cost estimate even though one of them indicates as same price of Japan product due to limitation of their production capacity in the Vietnamese factory.

(2) Reinforcement bar and PC strands

Reinforcement bar and PC strands are identified to be obtained in local market (originally from other countries). However, for the quality requirement and equality of reasonable pricing, origin country was assumed from Japan. Actually suppliers, being able to provide the materials having sufficient quality based on technical specification, are still limited in local market.

(3) Cable Material for Cable Stayed Bridge

Cable materials are crucial material for stability of cable stayed bridge. Thus, the quality shall be stable and required specification. Although other countries suppliers might be considered as possible suppler, product from Japan was considered as low risk procurement plan in this study.

(4) Welding Stud for SPSP

Welding stud needs special treatment for the part of welded to other steel material. According to inquiring of stud suppliers, procurement plan of welding stud was assumed from Japan.

(5) Flap Gate

The Flap gate was designed as composed by specified material. The standard is specifically “Duplex Stainless Steel (SUS323L)” (JIS G 4305). Therefore, the flap gate was considered to be procured from Japan according to inquiring of steel fabricators because gates shall have precise fabrication to be functional for opening and closing depending on water level in Bago river.

2.1.2 Concrete Product

2.1.2.1 Concrete Production in Package1&2

Concrete, in package1&2, shall be produced in site, because the amount is very big number and shipping time is crucial point in tropical weather country. Besides, the concrete mixer trucks shall be transported by barge. This providing method for river portion concrete is considered as unique from land portion. This point shall be risk of local concrete supplier. For emergency, cement silo was assumed to be installed 2 sets in 1 package. As alternative way of concrete supply, concrete supplier shall be examined as same as quality concrete shall be provided in advance.

2.1.2.2 Precast Concrete Product in Package1&2

Precast concrete products were planned to be casted in construction yard by providing concrete from concrete batcher plant in construction yard except for PC panel for PC-I girder in On-ramp and pipe culvert because those production methods need know-how as fabricator.

2.1.3 Bridge Accessories

2.1.3.1 Bearing

Bearing is considered as important product for supporting superstructure. In this study, the design principle, seismic coefficient, had been determined as “0.3”. In accordance with this design principle, bearing capability shall have high performance. The price of bearing was believed more expensive than expected price in F/S.

Therefore, in the procurement plan Vietnamese products are also examined then applied into cost summation. However, bearings for cable stayed bridge, pivot bearing and rocking bearing and so on, was expected to be procured from Japan because those bearings have very specified and complex function.

2.1.3.2 Expansion Joint

Fabricator of modular type of expansion joint cannot be found in this study except for Japanese factory in Japan. Thus, procurement plan is from Japan.

2.1.4 Pavement

Mainly pavement materials are planned to be provided from local supplier.

2.1.4.1 On Steel Deck

However, pavement materials for steel deck, improved asphalt mix and waterproof membrane, was planned to be procured from Japan.

2.1.5 Toll Plaza

In this study, only hard facility (as infrastructure) was planned for toll plaza. Soft facilities, such as auto collection system, will be installed when necessary. Therefore, mainly procurement was planned from local market in Myanmar.

2.1.6 Electrical Facility for Cable Stayed Bridge

Mainly those facilities were planned to be procured from Japan, in other word, pricing as same as Japanese price. In fact, it has been difficult to obtain quotation of electrical facilities. There might be still possibility of furthermore study of pricing.

2.1.7 Water

Supplying way of water was planned by installation of well for office and concrete batcher plant. For the quality of water for concrete was determined as qualified based on inquiring of well installation company having experience near site.

2.1.8 Electricity

Supplying way of electricity was planned mainly by generator for construction. For office, commercial supplied electricity was assumed.

2.1.9 Material Survey of Earth Work Materials and Quarry Site

Earthwork materials, such as roadbed material, filling soil, subgrade material and aggregates, are surveyed in this study (for furthermore information, referring to “material survey result”).

The roadbed soil samples were collected around project area. The filling soil samples were collected Thilawa and Thanlyin area. On the other hand, the subgrade and aggregates sample were collected from Mon State. The location of quarry sites is shown in Figure 2.1.1.

In accordance with the material survey result, material pits, preserving earth work materials, are located in Yangon central city, even though quarry sites are far from project site.

Source: JICA Study Team (Edited based on Google Earth map)

Figure 2.1.1 Quarry Site Location Based on Material Survey Result

2.2 CONSTRUCTION EQUIPMENT

Major construction equipment procurement plan, origin country, is shown in Table 2.2.1

Table 2.2.1 Major Construction Equipment Procurement

Description	Myanmar	Japan	Other	Remarks
Bulldozer	○			
Backhoe	○			
Dump Truck	○			
Truck	○			
Erection Girder and other temp.steel work		○		Raw material, Equipment
Portal Crane (60t hung)			○	From Singapore, Thai is possible
Navigation Buoy (Solar Type)			○	From Singapore, Thai is possible
Crawler Crane(Capacity below 200t)	○			
Crawler Crane(Capacity above 275t)			○	From Singapore is possible
Barge (Capacity below 2000t)	○			
Barge (Capacity above 3000t)			○	From Singapore is possible
Truck Crane	○			
Rough Terrain Crane	○			
Vibratory Hammer			○	From Singapore, Thai is possible
Hydraulic Hammer			○	From Singapore, Thai is possible
Welder for stud of SPSP		○		
Extraction Jack	○			
Reverse Circulation Drill	○			
Deep Layer Mixing Machine		○		As same as project near site
Cement Slurry Plant		○		As same as project near site
Motor Grader	○			
Road Roller	○			
Pneumatic Tire Roller	○			
Vibration Roller	○			
Tamper	○			
Concrete Pump Truck	○			
Asphalt Finisher	○			
Line Marker	○			
Concrete Finisher	○			
Concrete Leveler	○			

Source: JICA Study Team

2.3 SHIPPING ROUTE FROM MAJOR PORT FOR EACH PACKAGE

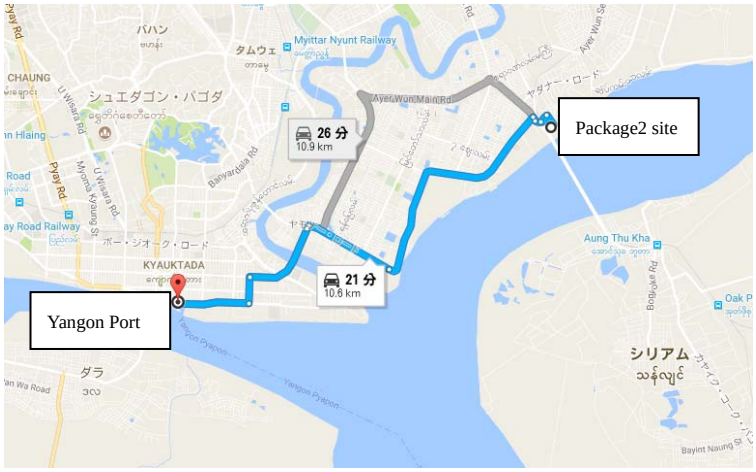
For Package1, all imported material and equipment arrive at Thilawa port.

For Package2, all imported material and equipment arrive at Yangon port as same as Package3 shipping route. Each land route is shown Figure 2.3.1, and Figure 2.3.2.

For big amount products freighted on large capacity barge, such as steel pipe and steel girder and tower blocks, those barges would be directory going to site. According to experience in the bridge project “Thaketa bridge” near site big capacity barge carrying steel pipe sheet piles can be pass custom at port without unloading materials at port, then brought to site directory. In this project, also same situation would be assumed for imported materials, especially steel pipes and steel products (girder and tower). Therefore, for those products only considered unloading in site by site equipment if necessary.

Source: JICA Study Team (Edited based on Google map)

Figure 2.3.1 Land Route from Thilawa Port to Package1 site



Source: JICA Study Team (Edited based on Google map)

Figure 2.3.2 Land Route from Yangon Port to Package2 site

CHAPTER 3. BREAKDOWN OF COST ESTIMATION

Table3-1

Project Cost Estimation

Cost Estimate Date/Bidding Date	May2017/＊＊
Country	Myanmar
Project title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Exchange Rate	1USD=113.11YPY、1MMK=0.0832YPY

Unit: Million

	Local(MMK)	Foreign(USD)	Main(JPY)	Total(JPY)
A_Eligible Portion	86,894	49	22,652	35,449
1) Procurement/Construction (a+b+c)	86,894	47	21,458	33,968
a_Base cost for eligible portion	76,147	36	19,037	29,478
b_Price escalation	10,746	2	642	1,799
c_Physical contingency		8	1,777	2,689
2) Consulting service		3	1,194	1,480
B_Non-Eligible Portion	11,502	7	3,495	5,287
a) Side road section	1,960		97	260
b) Land acquisition	45			4
c) Utility relocation	808			67
d) Administration cost	4,345	2	1,133	1,772
e) Commercial tax	4,345	2	1,133	1,772
f) Import tax		2	1,133	1,411
Total (A+B)	98,396	57	26,147	40,735
C_Interest during construction	23	0	6	9
Interest during construction(Const.)	23	0	5	9
Interest during construction(Consul.)		0	0	0
Grand total (A+B+C)	98,419	57	26,153	40,745
Eligible portion (D/D)	86,894	49	22,652	35,449
Eligible portion (F/S)	93,834	20,739		31,051
Ratio D/D:F/S	0.93	1.36		1.14

Table-3-2

Civil Works Construction Cost Breakdown_Package1

	Category	Item	Unit	Quantity	Local(MMK) Subtotal	Main(USD) Subtotal	Yen(JPY) Subtotal	Total Yen conv.	Item Conditions
Civil Works Construction Cost_Package1			LS	1	32,473,359,792	21,791,064	9,483,918,508	14,650,488,996	
	1. Preparation Works *Considered as General Temporary Works		LS	1	2,818,634,921	7,356	95,319,784	330,662,241	
	2. Foundation		LS	1	6,619,519,797	10,438,885	180,299,277	1,911,785,545	
	3. Substructure		LS	1	3,775,812,032	25,294	148,428,140	465,436,569	
	4. Superstructure	Cable stayed bridge	LS	1	3,403,246,473	1,021,633	3,794,834,868	4,193,541,882	
	5. Superstructure	PC box girder_SBS_PKG1	LS	1	2,485,489,390	1,982,447	345,511,761	776,539,079	
	6. Superstructure	PC-I girder_Ramp_PKG1	LS	1	346,833,655	14,821	22,774,292	53,307,270	
	7. Approach Road		LS	1	2,159,971,696	0	139,791,589	319,501,205	
	8. Waterworks		LS	1	361,694,496	0	16,524,491	46,617,462	
	9. Pavement		LS	1	1,102,580,267	0	106,866,475	198,601,142	
	10. Electrical work		LS	1	0	0	160,462,724	160,462,724	
	11. Design change Portion		LS	1	3,171,194,871	4,232,120	1,729,611,656	2,472,150,095	
	12. General temp. work cost		LS	1	4,932,468,194	3,688,908	488,792,411	1,316,426,144	
	13. Site expenses(Site management cost)		LS	1	1,295,914,000	379,600	1,178,790,453	1,329,547,050	
	14. Overhead cost		LS	1	0	0	1,005,876,188	1,005,876,188	OHC-1
	15. Dispute board		LS	1	0	0	70,034,400	70,034,400	

Table-3-3

Civil Works Construction Cost Breakdown_Package1

Cost Estimate Date/Bidding Date	May2017/＊＊
Country	Myanmar
Project title	Detailed Design Study on Bago River Bridge Construction Project
Project tType	Bridge
Exchange Rate	1USD=113.11YPY、1MMK=0.0832YPY

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
Civil Works Construction Cost_Package1				LS	1	-	32,473,359,792	-	21,791,064	-	9,483,918,508	14,650,488,996	
1. Preparation Works ＊Considered as General Temporary Works				LS	1	-	2,818,634,921	-	7,356	-	95,319,784	330,662,241	
	Temporary Road	Temporary road	Type A	m2	962	27,380	26,339,897	0.0	0.0	0	0	2,191,479	00-191
	PKG1	Temporary road	Type B	m2	3456	30,480	105,338,327	0.0	0.0	0	0	8,764,148	00-6
		Temporary road	Type C	m2	742	43,245	32,087,976	0.0	0.0	0	0	2,669,719	00-7
		Cement stabilization		m3	5408	4,574	24,733,488	0.0	0.0	0	0	2,057,826	00-15
		Cement material	Flexible container bag	ton	324.48	84,600	27,451,008	0.0	0.0	0	0	2,283,923	Mat-166
	Subtotal				-	-	215,950,695	-	0	-	0	17,967,095	
	Diversion Road	Diversion road	Section-1	m2	1044	62,275	65,014,682	0.0	0.0	0	0	5,409,221	00-197
	PKG1	Diversion road	Section-2	m2	616	102,686	63,254,681	0.0	0.0	0	0	5,262,789	00-198
		Diversion road	Section-3	m2	472	62,275	29,393,611	0.0	0.0	0	0	2,445,548	00-199
	Subtotal				-	-	157,662,974	-	0	-	0	13,117,558	
	Temporary Jetty	Temporary_Jetty	Superstructure_Installation	t	168	448,742	75,388,705	0.0	0.0	0	0	6,272,340	00-24
	Jetty No.1	Temporary_Jetty	Deck pannel	m2	1248	33,187	41,417,775	0.0	0.0	0	0	3,445,958	00-25
		Temporary_Jetty	Guared rail installation	m	220	1,021	224,532	0.0	0.0	0	0	18,681	00-26
		Temporary_Jetty	H400_L=40.7m_Pile_Driving_25m	nos	52	1,693,266	88,049,813	0.0	0.0	0	0	7,325,744	00-27
		Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	t	213.43	686,036	146,420,751	0.0	0.0	0	0	12,182,206	00-28
		Temporary_Jetty	Guide(Pile)Install_Driving_below13m H300	nos	42	483,790	20,319,188	0.0	0.0	0	0	1,690,556	00-29
		Temporary_Jetty	Guide(Frame)Install / Remove	nos	52	212,361	11,042,783	0.0	0.0	0	0	918,759	00-30
		Temporary_Jetty	Guide(Pile)Pulling_below13m H300	nos	42	260,502	10,941,101	0.0	0.0	0	0	910,299	00-31
		Temporary_Jetty	Remove superstructure	t	168	245,450	41,235,642	0.0	0.0	0	0	3,430,805	00-149
		Temporary_Jetty	Remove_deck pannel	m2	1248	16,689	20,828,371	0.0	0.0	0	0	1,732,920	00-150
		Temporary_Jetty	Remove_Gurad rail	m	220	966	212,505	0.0	0.0	0	0	17,680	00-151
		Temporary_Jetty	H400_L=40m_Pile remove_Pulling25m	nos	52	317,421	16,505,913	0.0	0.0	0	0	1,373,291	00-152
		Temporary_Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	t	213.43	477,209	101,850,651	0.0	0.0	0	0	8,473,974	00-153
		Temprary Jetty No.1	Material	LS	1	0	0	0.0	0.0	39,340,636	39,340,636	39,340,636	00-200
	Subtotal				-	-	574,437,729	-	0	-	39,340,636	87,133,849	
	Temporary Jetty	Temporary_Jetty	Superstructure_Installation	t	103.9	448,742	46,624,324	0.0	0.0	0	0	3,879,143	00-24
	Jetty No.2	Temporary_Jetty	Deck pannel	m2	936	33,187	31,063,332	0.0	0.0	0	0	2,584,469	00-25
		Temporary_Jetty	Guared rail installation	m	238	1,021	242,903	0.0	0.0	0	0	20,209	00-26
		Temporary_Jetty	H400_L=22.7m_Pile install_Driving_20m	nos	133	1,128,844	150,136,220	0.0	0.0	0	0	12,491,333	00-27
		Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	t	63.24	686,036	43,384,943	0.0	0.0	0	0	3,609,627	00-28
		Temporary_Jetty	Guide(Pile)Install_Driving_below10m H300	nos	107	398,415	42,630,452	0.0	0.0	0	0	3,546,853	00-204
		Temporary_Jetty	Guide(Frame)Install / Remove	nos	133	212,361	28,244,041	0.0	0.0	0	0	2,349,904	00-30
		Temporary_Jetty	Guide(Pile)Remove_Pulling_below10m_H300	nos	107	225,769	24,157,256	0.0	0.0	0	0	2,009,883	00-205
		Temporary_Jetty	Remove superstructure	t	103.9	245,450	25,502,281	0.0	0.0	0	0	2,121,789	00-149
		Temporary_Jetty	Remove_deck pannel	m2	936	16,689	15,621,278	0.0	0.0	0	0	1,299,690	00-150
		Temporary_Jetty	Remove_Gurad rail	m	238	966	229,891	0.0	0.0	0	0	19,126	00-151
		Temporary_Jetty	H400_L=22.7m_Pile remove_Pulling_20m	nos	133	356,477	47,411,438	0.0	0.0	0	0	3,944,631	00-206
		Temporary_Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	t	63.24	477,209	30,178,678	0.0	0.0	0	0	2,510,865	00-153
		Temprary Jetty No.2	Material	LS	1	0	0	0.0	0.0	51,602,273	51,602,273	51,602,273	00-201
	Subtotal				-	-	485,427,037	-	0	-	51,602,273	91,989,795	
	Temporary Jetty	Temporary_Jetty	Superstructure_Installation	t	18.11	448,742	8,126,723	0.0	0.0	0	0	676,143	00-24
	for Concrete transportation	Temporary_Jetty	Guared rail installation	m	71.2	1,021	72,667	0.0	0.0	0	0	6,045	00-26
		Temporary_Jetty	H400_L=27.5m_Pile install_Driving_20m	nos	39	1,128,844	44,024,907	0.0	0.0	0	0	3,662,872	00-207
		Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	t	9.22	686,036	6,325,256	0.0	0.0	0	0	526,261	00-28
		Temporary_Jetty	Guide(Pile)Istallation_Driving_Below10m_H300	nos	32	398,415	12,749,294	0.0	0.0	0	0	1,060,741	00-208
		Temporary_Jetty	Guide(Frame)Install / Remove	nos	39	212,361	8,282,087	0.0	0.0	0	0	689,069	00-30
		Temporary_Jetty	Guide(Pile)Remove_pulling_below10m_H300	nos	32	225,769	7,224,600	0.0	0.0	0	0	601,086	00-209
		Temporary_Jetty	Remove superstructure	t	18.11	245,450	4,445,104	0.0	0.0	0	0	369,832	00-149
		Temporary_Jetty	Remove_Gurad rail	m	71.2	966	68,774	0.0	0.0	0	0	5,722	00-151
		Temporary_Jetty	H400_L=27.5m_Pile remove_Pulling_20m	nos	39	356,477	13,902,602	0.0	0.0	0	0	1,156,696	00-210
		Temporary_Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	t	9.22	477,209	4,399,864	0.0	0.0	0	0	366,068	00-153
		Inclined Jetty	Material	LS	1	0	0	0.0	0.0	4,376,875	4,376,875	4,376,875	00-202
	Subtotal				-	-	109,621,878	-	0	-	4,376,875	13,497,410	
	Reclamation of construction & std	Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	35146.857	16,802	590,521,675	0.0	0.0	0	0	49,131,403	01-179
	PKG1	Shaping slope of embankment	By machinery for Sand soil	m2	282	2,479	699,086	0.0	0.0	0	0	58,163	00-19
		Sodding	on slope	m2	282	1,169	329,604	0.0	0.0	0	0	27,423	00-33
		Sheet pile driving	Nmax＜50,Type III,shorter than 12m	nos	285	20,837	5,938,479	9.2	2,627.7	0	0	791,300	00-91
		Sheet pile pulling	Nmax＜50,shorter than 12m	nos	285	11,788	3,359,623	5.4	1,524.8	0	0	451,985	00-92
		Steel sheet pile	Type III	ton	205.2	927,504	190,323,821	0.0	0.0	0	0	15,834,941	Mat-163
		Scrap	70%		-0.7	190,323,821	(133,226,675)	0.0	0.0	0	0	(11,084,459)	
		Sheet pile driving	Nmax＜50,Type II,shorter than 9m	nos	275	15,902	4,372,981	7.0	1,936.0	0	0	582,813	00-183
		Sheet pile pulling	Nmax＜50,shorter than 9m	nos	275	10,162	2,794,602	4.6	1,267.8	0	0	375,906	00-184
		Steel sheet pile	Type II	ton	105.6	905,424	95,612,753	0.0	0.0	0	0	7,954,981	Mat-164
		Scrap	70%		-0.7	95,612,753	(66,928,927)	0.0	0.0	0	0	(5,568,486)	
		Cement stabilization		m3	33029.5	4,574	151,060,418	0.0	0.0	0	0	12,568,226	00-15
		Cement material	Flexible container bag	t	1981.77	84,600	167,657,742	0.0	0.0	0	0	13,949,124	Mat-166
		Base course leveling(Only compaction without material)	Subbase t=200mm	m2	9100	980	8,916,453	0.0	0.0	0	0	741,848	00-187
		TypeA	Concrete_t:10cm_Class E	m3	1627	103,988	169,188,460	0.0	0.0	0	0	14,076,479	00-188
		TypeB	Asphalt_t:5cm	m2	3200	10,589	33,884,640	0.0	0.0	0	0	2,819,202	00-189
		TypeC	Crushed stone_t:15cm	m2	16466.6667	3,099	51,029,871	0.0	0.0	0	0	4,245,685	00-190
	Subtotal				-	-	1,275,534,608	-	7,356	-	0	106,956,534	
2. Foundation				LS	1	-	6,619,519,797	-	10,438,885	-	180,299,277	1,911,785,545	
	Foundation_cast in bored pile_RCD	Pile Cast in Site_A1	RCD pile φ1500_L=53.0m	nos	28	21,690,896	607,345,099	1,378.9	38,609.8	679,801	19,034,428	73,932,690	00-40
	PKG1	Pile Cast in Site_P1	RCD pile φ2000_L=58.0m	nos	12	34,868,078	418,416,937	1,642.4	19,708.7	1,344,665	16,135,980	53,177,517	00-41
		Pile Cast in Site_P2	RCD pile φ2000_L=62.0m	nos	12	37,988,943	455,867,312	1,894.2	22,729.9	1,344,665	16,135,980	56,635,121	00-42
		Pile Cast in Site_P3	RCD pile φ2000_L=57.0m	nos	12	34,652,178	415,826,133	1,642.4	19,708.7	1,406,014	16,872,168	53,698,151	00-43
		Pile Cast in Site_P4	RCD pile φ2000_L=57.5m	nos	12	35,955,955	431,471,459	1,642.4	19,708.7	1,459,615	17,515,380	55,643,054	00-44
		Pile Cast in Site_P5	RCD pile φ2000_L=55.5m	nos	21	33,665,968	706,985,332	1,642.4	34,490.2	1,197,799	25,153,779	87,876,144	00-45
	Subtotal				-	-	3,035,912,272	-	154,956	-	110,847,715	380,962,677	
	Foundation_SPSP	Guide	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	nos	56	308,832	17,294,577	668.4	37,432.6	47,822	2,678,054	8,350,969	00-57
	Cable stayed bridge	Guide	Guide(Frame)Falswork_Install	t	212.8	77,660	16,526,031	1,924.2	409,469.8	19,969	4,249,361	51,939,450	00-58
		Steel Pipe Sheet Pile Driving	Cable stayed bridge(350 t CC & 275 t CC)	LS	1	1,378,480,824	1,378,480,824	4,771,318.6	4,771,318.6	0	0	654,373,446	00-59
		Material cost	Steel Pipe Sheet Pile	LS	1	0	0	4,958,802.3	4,958,802.3	0	0	560,890,122	00-60
		Excavation inside of the pipe pile		m3	2004	91,385	183,135,520	0.0	0.0	0	0	15,236,875	00-61
		Concrete Filling to Steel Pipe		m3	1618.4	116,062	187,834,142	0.0	0.0	0	0	15,627,800	00-62
		Cleaning of Inside joint pipe		m	10359	7,453	77,206,456	1.4	14,709.8	0	0	8,087,400	00-63
		Mortar filling of Inside joint pipe		m	9868.9	3,457	34,120,537	0.0	0.0	103	1,016,595	3,855,424	00-64
		Sealing of Inside joint pipe	P-P_type	m	2082.4	1,854	3,861,665	0.0	0.0	621	1,292,608	1,613,898	00-65
		Excavation inside of the well		m3	7967.7	22,464	178,985,058	6.5	51,790.1	0	0	20,749,529	00-66
		Spread sand		m3	389	53,032	20,629,289	10.0	3,886.1	0	0	2,155,914	00-67
		Bottom slab concrete		m3	1926.6	138,022	265,912,588	0.0	0.0	0	0	22,123,927	00-68
		Falswork Install / Remove	Install65%_Remove35%	t	454.6	771,851	350,883,360	0.0	0.0	20,125	9,148,916	38,342,411	00-69
		Concrete filling to space between steel pipe wall and wale		m3	124.4	671,092	83,483,832	0.0	0.0	0	0	6,945,854	00-70
		Welding of the dowel	Stud welding_1,000mm 1 row 4nos	nos	3040	7,286	22,148,011	0.0	0.0	2,994	9,101,699	10,944,413	00-71
		Welding of the dowel	Stud welding_700mm 1 row 4nos	nos	6728	7,286	49,017,046	0.0	0.0	2,819	18,967,241	23,045,459	00-72
		Steel pipe sheet pile Cut&Removal		nos	184	342,320	62,986,810	15.0	2,758.2	0	0	5,552,478	00-73
	Subtotal				-	-	2,932,505,747	-	10,250,167	-	46,454,475	1,449,835,369	
	Foundation_cast in bored pile_RCD	Pile Cast in Site_A01	RCD pile φ1500_L=56.5m	nos	9	22,399,207	201,592,859	1,378.9	12,410.3	679,801	6,118,209	24,294,461	00-46
	Ramp	Pile Cast in Site_P01	RCD pile φ2000_L=57.0m	nos	5	34,618,017	173,090,087	1,642.4	8,212.0	1,406,238	7,031,190	22,361,138	00-47
		Pile Cast in Site_P02	RCD pile φ2000_L=57.5m	nos	4	34,458,024	137,832,097	1,642.4	6,569.6	1,228,676	4,914,704	17,125,417	00-48
		Pile Cast in Site_P03	RCD pile φ2000_L=58.0m	nos	4	34,646,684	138,586,734	1,642.4	6,569.6	1,233,246	4,932,984	17,206,483	00-49
	Subtotal				-	-	651,101,778	-	33,761	-	22,997,087	80,987,499	
3. Substructure				LS	1	-	3,775,812,032	-	25,294	-	148,428,140	465,436,569	
	Abutment_1	Excavation	Leveling of bottom	m3	758.3	2,098	1,590,633	0.0	0.0	0	0	132,340	00-87
	Pile cap	Transportation of excavated soil	0	m3	947.875	2,970	2,814,715	0.0	0.0	0	0	234,184	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	172.3	20,940	3,608,002	0.0	0.0	0	0	300,185	00-76
		Leveling	by Machine	m2	258.6	365	94,260	0.0	0.0	0	0	7,842	00-75
		Crush stone base work	Crush stone,t=20cm	m2	258.6	2,604	673,371	0.0	0.0	0	0	56,024	01-33
		Concrete work(1)	18N/mm2	m3	25.9	95,194	2,465,536	0.0	0.0	0	0	205,132	00-52
		Form work	for level concrete	m2	6.7	448	3,002	0.0	0.0	0	0	249	01-24
		Concrete work for Pier(2)_On land	Class D	m3	478.8	91,335	43,730,978	0.0	0.0	0	0	3,638,417	00-78
		Form work	for ordinal concrete_with&without rebar	m2	125.4	8,785	1,101,603	0.0	0.0	0	0	91,653	01-22
		Rebar work_SD345	Arranging D13	ton	0.185	126,764	23,451	0.0	0.0	78,422	14,508	16,459	00-79
		Rebar work_SD345	Arranging D16-D25	ton	11.187	114,348	1,279,206	0.0	0.0	81,271	909,179	1,015,608	00-80
		Rebar work_SD345	Arranging D29-D32	ton	12.998	80,841	1,050,766	0.0	0.0	83,080	1,079,874	1,167,297	00-81
		Rebar work_SD345	Assembling D13	ton	0.185	154,137	28,515	0.0	0.0	0	0	2,372	00-82
		Rebar work_SD345	Assembling D16-D25	ton	11.187	128,135	1,433,442	0.0	0.0	0	0	119,262	00-83
		Rebar work_SD345	Assembling D29-D32	ton	12.998	78,633	1,022,069	0.0	0.0	0	0	85,036	00-84
		Sheet pile driving	Nmax＜50,Type III,shorter than 12m	nos	185	20,837	3,854,802	9.2	1,705.7	0	0	513,651	00-91
		Sheet pile pulling	Nmax＜50,shorter than 12m	nos	185	11,788	2,180,808	5.4	989.8	0	0	293,393	00-92
		Steel sheet pile	TypeII	ton	138.75	927,504	128,691,180	0.0	0.0	0	0	10,707,106	Mat-163
		Depreciation	70%		-0.7	128,691,180	(90,083,826)	0.0	0.0	0	0	(7,494,974)	
	Subtotal				-	-	105,562,512	-	2,695	-	2,003,561	11,091,236	
	Abutment_1	Concrete work for Pier(2)_On land	Class D	m3	156.4	91,335	14,284,722	0.0	0.0	0	0	1,188,488	00-78
	Wall, Parapet, Wing wall	Form work	for ordinal concrete_with&without rebar	m2	324.8	8,785	2,853,274	0.0	0.0	0	0	237,392	01-22
		Rebar work_SD345	Arranging D13	ton	0.214	126,764	27,127	0.0	0.0	78,422	16,782	19,039	00-79
		Rebar work_SD345	Arranging D16-D25	ton	5.242	114,348	599,410	0.0	0.0	81,271	426,023	475,893	00-80
		Rebar work_SD345	Arranging D29-D32	ton	15.116	80,841	1,221,986	0.0	0.0	83,080	1,255,837	1,357,506	00-81
		Rebar work_SD345	Assembling D13	ton	0.214	154,137	32,985	0.0	0.0	0	0	2,744	00-82
		Rebar work_SD345	Assembling D16-D25	ton	5.242	128,135	671,681	0.0	0.0	0	0	55,883	00-83
		Rebar work_SD345	Assembling D29-D32	ton	15.116	78,633	1,188,613	0.0	0.0	0	0	98,892	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	19	137,517	2,612,831	0.0	0.0	0	0	217,387	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	0	17,532	0	0.0	0.0	0	0	0	00-86
		Supporting	Wedge type	m3	306.8	17,796	5,459,840	0.0	0.0	0	0	454,258	02-237
		Non-shrink Mortar	0	m3	0.6	2,565,045	1,539,027	0.0	0.0	0	0	128,047	02-229
	Subtotal				-	-	30,491,498	-	0	-	1,698,642	4,235,529	
	Pier_on Land	Excavation	Leveling of bottom	m3	4255.6	2,098	8,926,674	0.0	0.0	0	0	742,699	00-87
	Pile cap_Concrete 24N/mm2	Transportation of excavated soil		m3	5319.5	2,970	15,796,255	0.0	0.0	0	0	1,314,248	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	1327.5	20,940	27,798,155	0.0	0.0	0	0	2,312,806	00-76
		Leveling	by Machine	m2	1282.6	365	467,508	0.0	0.0	0	0	38,896	00-75
		Crush stone base work	Crush stone,t=20cm	m2	1282.6	2,604	3,339,775	0.0	0.0	0	0	277,869	01-33
		Concrete work(1)	18N/mm2	m3	123.4	95,194	11,746,995	0.0	0.0	0	0	977,349	00-52
		Form work	for level concrete	m2	33.1	448	14,832	0.0	0.0	0	0	1,234	01-24
		Concrete work for Pier(2)_On land	Class D	m3	2408.6	91,335	219,988,373	0.0	0.0	0	0	18,303,032	00-78
		Form work	for ordinal concrete_with&without rebar	m2	627.4	8,785	5,511,527	0.0	0.0	0	0	458,559	01-22
		Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	64.892	114,348	7,420,243	0.0	0.0	81,271	5,273,838	5,891,201	00-80
		Rebar work_SD345	Arranging D29-D32	ton	226.435	80,841	18,305,134	0.0	0.0	83,080	18,812,220	20,335,206	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	ton	64.892	128,135	8,314,909	0.0	0.0	0	0	691,800	00-83
		Rebar work_SD345	Assembling D29-D32	ton	226.435	78,633	17,805,214	0.0	0.0	0	0	1,481,393	00-84
		Sheet pile driving	Nmax＜50,Type III,shorter than 12m	nos	1124	20,837	23,420,529	9.2	10,363.3	0	0	3,120,778	00-91
		Sheet pile pulling	Nmax＜50,shorter than 12m	nos	1124	11,788	13,249,881	5.4	6,013.4	0	0	1,782,565	00-92
		Steel sheet pile	6×50	ton	843	927,504	781,885,872	0.0	0.0	0	0	65,052,904	Mat-163
		Depreciation	70%		-0.7	781,885,872	(547,320,110)	0.0	0.0	0	0	(45,537,033)	
	Subtotal				-	-	616,671,767	-	16,377	-	24,086,058	77,245,506	

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
	Pier_on Land	Concrete work for Pier(2)_On land	Class D	m3	494.5	91,335	45,164,930	0.0	0.0	0	0	3,757,722	00-78
	Column_24N/mm2_P1-3	Form work	for ordinal concrete_with&without rebar	m2	438.5	8,785	3,852,095	0.0	0.0	0	0	320,494	01-22
		Rebar work_SD345	Arranging D13	ton	1.421	126,764	180,131	0.0	0.0	78,422	111,438	126,424	00-79
		Rebar work_SD345	Arranging D16-D25	ton	38.752	114,348	4,431,197	0.0	0.0	81,271	3,149,414	3,518,089	00-80
		Rebar work_SD345	Arranging D29-D32	ton	0	80,841	0	0.0	0.0	83,080	0	0	00-81
		Rebar work_SD345	Assembling D13	ton	1.421	154,137	219,029	0.0	0.0	0	0	18,223	00-82
		Rebar work_SD345	Assembling D16-D25	ton	38.752	128,135	4,965,471	0.0	0.0	0	0	413,127	00-83
		Rebar work_SD345	Assembling D29-D32	ton	0	78,633	0	0.0	0.0	0	0	0	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	60	137,517	8,251,045	0.0	0.0	0	0	686,486	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	537.2	17,532	9,418,088	0.0	0.0	0	0	783,584	00-86
		Supporting	Wedge type	m3	0	17,796	0	0.0	0.0	0	0	0	02-237
		Non-shrink Mortar		m3	3.9	2,565,045	10,003,676	0.0	0.0	0	0	832,305	02-229
	Subtotal					–	86,485,662	–	0	–	3,260,851	10,456,454	
	Pier_on Land	Concrete work for Pier(2)_On land	Class C I	m3	953.9	97,031	92,557,795	0.0	0.0	0	0	7,700,808	00-56
	Column_30N/mm2_P4-5	Form work	for ordinal concrete_with&without rebar	m2	659.2	8,785	5,790,881	0.0	0.0	0	0	481,801	01-22
		Rebar work_SD345	Arranging D13	ton	2.15	126,764	272,542	0.0	0.0	78,422	168,607	191,282	00-79
		Rebar work_SD345	Arranging D16-D25	ton	57.529	114,348	6,578,301	0.0	0.0	81,271	4,675,439	5,222,754	00-80
		Rebar work_SD345	Arranging D29-D32	ton	15.321	80,841	1,238,558	0.0	0.0	83,080	1,272,869	1,375,916	00-81
		Rebar work_SD345	Assembling D13	ton	2.15	154,137	331,394	0.0	0.0	0	0	27,572	00-82
		Rebar work_SD345	Assembling D16-D25	ton	57.529	128,135	7,371,454	0.0	0.0	0	0	613,304	00-83
		Rebar work_SD345	Assembling D29-D32	ton	15.321	78,633	1,204,733	0.0	0.0	0	0	100,233	00-84
		Rebar work_SD390	Arranging D16-D25	ton	9.152	114,348	1,046,509	0.0	0.0	79,372	726,413	813,482	00-212
		Rebar work_SD390	Arranging D29-D32	ton	0	80,841	0	0.0	0.0	80,321	0	0	00-213
		Rebar work_SD390	Assembling D16-D25	ton	9.152	128,135	1,172,688	0.0	0.0	0	0	97,567	00-215
		Rebar work_SD390	Assembling D29-D32	ton	0	78,633	0	0.0	0.0	0	0	0	00-216
		Miscellaneous work	Form work_Cylindrical type φ170	nos	40	137,517	5,500,697	0.0	0.0	0	0	457,657	00-85
		Non-shrink Mortar	0	m3	3	2,565,045	7,695,135	0.0	0.0	0	0	640,235	02-229
		Falsework	Scaffloding (Handrail precede type)	m2	0	17,532	0	0.0	0.0	0	0	0	00-86
		Supporting	Wedge type	m3	816.9	17,796	14,537,626	0.0	0.0	0	0	1,209,530	02-237
		Installation of barrier, railing	0	m	51.78	4,312	223,263	0.0	0.0	0	0	18,575	01-134
		Fabrication_Railing on pier	P5(PKG1)	LS	1	511,139	511,139	0.0	0.0	198,437	198,437	240,963	01-198
	Subtotal					–	146,032,715	–	0	–	7,041,765	19,191,679	
	Pier_on River	Pile cap_on River	Class D	m3	3697.2	105,754	390,993,948	0.0	0.0	0	0	32,530,696	00-50
	Pile cap	Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	39.258	114,348	4,489,057	0.0	0.0	81,271	3,190,537	3,564,026	00-80
		Rebar work_SD345	Arranging D29-D32	ton	17.344	80,841	1,402,099	0.0	0.0	83,080	1,440,940	1,557,594	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	ton	39.258	128,135	5,030,307	0.0	0.0	0	0	418,521	00-83
		Rebar work_SD345	Assembling D29-D32	ton	17.344	78,633	1,363,807	0.0	0.0	0	0	113,468	00-84
		Rebar work_SD345	Arranging D38	ton	62.904	126,764	7,973,932	0.0	0.0	81,271	5,112,271	5,775,702	00-226
		Rebar work_SD345	Arranging D51	ton	276.724	126,764	35,078,508	0.0	0.0	83,080	22,990,230	25,908,761	00-228
		Rebar work_SD345	Assembling D38	ton	62.904	154,137	9,695,829	0.0	0.0	0	0	806,693	00-230
		Rebar work_SD345	Assembling D51	ton	276.724	154,137	42,653,388	0.0	0.0	0	0	3,548,761	00-232
		Mechanical joint	D35, deformed bar	nos	220	0	0	0.0	0.0	2,493	548,460	548,460	Mat-292
		Mechanical joint	D38, deformed bar	nos	348	0	0	0.0	0.0	3,006	1,046,088	1,046,088	Mat-293
		Mechanical joint	D51, deformed bar	nos	1072	0	0	0.0	0.0	5,832	6,251,904	6,251,904	Mat-295
		Crawler crane	50～55t hang	day	135	297,147	40,114,872	0.0	0.0		0	3,337,557	OPE-26
		Barge	800t	day	135	1,388,221	187,409,856	0.0	0.0	0	0	15,592,500	Mac-d(20)
		Rebar work_SD345	Arranging D35	ton	28.528	126,764	3,616,310	0.0	0.0	80,321	2,291,397	2,592,274	00-225
		Rebar work_SD345	Assembling D35	ton	28.528	154,137	4,397,218	0.0	0.0	0	0	365,848	00-229
	Subtotal					–	734,219,131	–	0	–	42,871,827	103,958,853	
	Pier_on River	Concrete work for Pier(2)_On river	Class C I	m3	7799	111,351	868,425,981	0.0	0.0	0	0	72,253,041	00-89
	Column_30N/mm2	Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	332.159	114,348	37,981,575	0.0	0.0	81,271	26,994,894	30,154,961	00-80
		Rebar work_SD345	Arranging D29-D32	ton	146.077	80,841	11,808,948	0.0	0.0	83,080	12,136,077	13,118,581	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	ton	332.159	128,135	42,561,054	0.0	0.0	0	0	3,541,079	00-83
		Rebar work_SD345	Assembling D29-D32	ton	146.077	78,633	11,486,441	0.0	0.0	0	0	955,671	00-84
		Rebar work_SD345	Arranging D38	ton	0	126,764	0	0.0	0.0	81,271	0	0	00-226
		Rebar work_SD345	Arranging D51	ton	176.674	126,764	22,395,818	0.0	0.0	83,080	14,678,076	16,541,407	00-228
		Rebar work_SD345	Assembling D38	ton	0	154,137	0	0.0	0.0	0	0	0	00-230
		Rebar work_SD345	Assembling D51	ton	176.674	154,137	27,231,988	0.0	0.0	0	0	2,265,701	00-232
		Mechanical joint	D38, deformed bar	nos	0	0	0	0.0	0.0	3,006	0	0	Mat-293
		Mechanical joint	D51, deformed bar	nos	824	0	0	0.0	0.0	5,832	4,805,568	4,805,568	Mat-295
		Crawler crane	50～55t hang	day	198	297,147	58,835,146	0.0	0.0		0	4,895,084	OPE-26
		Barge	800t	day	198	1,388,221	274,867,788	0.0	0.0	0	0	22,869,000	Mac-d(20)
		Non-shrink Mortar		m3	8.796	2,565,045	22,562,136	0.0	0.0	0	0	1,877,169	02-229
		Form work	Ordinal type	m2	1364.8	13,806	18,843,043	0.0	0.0	0	0	1,567,741	00-156
		Form work	Plywood curved panel	m2	2083.4	17,762	37,004,517	0.0	0.0	0	0	3,078,775	00-157
		Scaffolding	Hand rail precede type	m2	4282	9,747	41,734,898	0.0	0.0	289	1,235,914	4,708,257	00-158
		Supporting	Wedge type	m3	3122	17,796	55,559,393	0.0	0.0	0	0	4,622,541	02-237
		Bracket support	Pierhead_coping	LS	1	283,034,662	283,034,662	0.0	0.0	0	0	23,548,483	00-159
		Installation of barrier, railing		m	186.6	4,312	804,574	0.0	0.0	0	0	66,940	01-134
		Fabrication_Railing on pier	Cable stayed bridge(PKG1)	LS	1	1,739,596	1,739,596	0.0	0.0	718,356	718,356	863,090	01-199
	Subtotal					–	1,816,877,558	–	0	–	60,568,885	211,733,089	
	Abutment_O_1(Ramp)	Excavation	Leveling of bottom	m3	843.8	2,098	1,769,980	0.0	0.0	0	0	147,262	00-87
	Pile cap	Transportation of excavated soil	0	m3	1054.75	2,970	3,132,080	0.0	0.0	0	0	260,589	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	147.3	20,940	3,084,496	0.0	0.0	0	0	256,630	00-76
		Leveling	by Machine	m2	84.6	365	30,837	0.0	0.0	0	0	2,565	00-75
		Crush stone base work	Crush stone,t=20cm	m2	84.6	2,604	220,291	0.0	0.0	0	0	18,328	01-33
		Concrete work(1)	18N/mm2	m3	8.5	95,194	809,153	0.0	0.0	0	0	67,321	00-52
		Form work	for level concrete	m2	3.7	448	1,658	0.0	0.0	0	0	137	01-24
		Concrete work for Pier(2)_On land	Class D	m3	153.9	91,335	14,056,386	0.0	0.0	0	0	1,169,491	00-78
		Form work	for ordinal concrete_with&without rebar	m2	68.4	8,785	600,874	0.0	0.0	0	0	49,992	01-22
		Rebar work_SD345	Arranging D13	ton	0.139	126,764	17,620	0.0	0.0	78,422	10,901	12,366	00-79
		Rebar work_SD345	Arranging D16-D25	ton	3.485	114,348	398,501	0.0	0.0	81,271	283,229	316,384	00-80
		Rebar work_SD345	Arranging D29-D32	ton	2.581	80,841	208,650	0.0	0.0	83,080	214,429	231,789	00-81
		Rebar work_SD345	Assembling D13	ton	0.139	154,137	21,425	0.0	0.0	0	0	1,782	00-82
		Rebar work_SD345	Assembling D16-D25	nos	3.485	128,135	446,549	0.0	0.0	0	0	37,152	00-83
		Rebar work_SD345	Assembling D29-D32	ton	2.581	78,633	202,951	0.0	0.0	0	0	16,885	00-84
		Sheet pile driving	Nmax<50,Type II,shorter than 12m	nos	110	20,837	2,292,045	9.2	1,014.2	0	0	305,414	00-91
		Sheet pile pulling	Nmax<50,shorter than 12m	nos	110	11,788	1,296,697	5.4	588.5	0	0	174,450	00-92
		Steel sheet pile	TypeII	ton	82.5	927,504	76,519,080	0.0	0.0	0	0	6,366,387	Mat-163
		Depreciation	70%	0	-0.7	76,519,080	(53,563,356)	0.0	0.0	0	0	(4,456,471)	
	Subtotal					–	51,545,916	–	1,603	–	508,560	4,978,453	
	Abutment_O_1(Ramp)	Concrete work for Pier(2)_On land	Class D	m3	78.2	91,335	7,142,361	0.0	0.0	0	0	594,244	00-78
	Wall, Parapet, Wing wall	Form work	for ordinal concrete_with&without rebar	m2	191.9	8,785	1,685,786	0.0	0.0	0	0	140,257	01-22
		Rebar work_SD345	Arranging D13	ton	0.206	126,764	26,113	0.0	0.0	78,422	16,155	18,327	00-79
		Rebar work_SD345	Arranging D16-D25	ton	6.277	114,348	717,760	0.0	0.0	81,271	510,138	569,855	00-80
		Rebar work_SD345	Arranging D29-D32	ton	1.558	80,841	125,950	0.0	0.0	83,080	129,439	139,917	00-81
		Rebar work_SD345	Assembling D13	ton	0.206	154,137	31,752	0.0	0.0	0	0	2,641	00-82
		Rebar work_SD345	Assembling D16-D25	nos	6.277	128,135	804,301	0.0	0.0	0	0	66,917	00-83
		Rebar work_SD345	Assembling D29-D32	ton	1.558	78,633	122,510	0.0	0.0	0	0	10,192	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	6	137,517	825,105	0.0	0.0	0	0	68,648	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	159.6	17,532	2,798,077	0.0	0.0	0	0	232,799	00-86
		Supporting	Wedge type	m3	0	17,796	0	0.0	0.0	0	0	0	02-237
		Non-shrink Mortar	0	m3	0.1	2,565,045	256,505	0.0	0.0	0	0	21,341	02-229
	Subtotal					–	14,536,218	–	0	–	655,732	1,865,138	
	Pier_on Land	Excavation	Leveling of bottom	m3	843.8	2,098	1,769,980	0.0	0.0	0	0	147,262	00-87
	Pile cap_Concrete 24N/mm2_P01-3	Transportation of excavated soil		m3	1054.75	2,970	3,132,080	0.0	0.0	0	0	260,589	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	339	20,940	7,098,738	0.0	0.0	0	0	590,614	00-76
		Leveling	by Machine	m2	231.9	365	84,528	0.0	0.0	0	0	7,032	00-75
		Crush stone base work	Crush stone,t=20cm	m2	231.9	2,604	603,847	0.0	0.0	0	0	50,240	01-33
		Concrete work(1)	18N/mm2	m3	23.2	95,194	2,208,511	0.0	0.0	0	0	183,748	00-52
		Form work	for level concrete	m2	10.6	448	4,750	0.0	0.0	0	0	395	01-24
		Concrete work for Pier(2)_On land	Class D	m3	421	91,335	38,451,841	0.0	0.0	0	0	3,199,193	00-78
		Form work	for ordinal concrete_with&without rebar	m2	195.3	8,785	1,715,654	0.0	0.0	0	0	142,742	01-22
		Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	14.752	114,348	1,686,855	0.0	0.0	81,271	1,198,910	1,339,256	00-80
		Rebar work_SD345	Arranging D29-D32	ton	10.468	80,841	846,239	0.0	0.0	83,080	869,681	940,088	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	nos	14.752	128,135	1,890,241	0.0	0.0	0	0	157,268	00-83
		Rebar work_SD345	Assembling D29-D32	ton	10.468	78,633	823,128	0.0	0.0	0	0	68,484	00-84
		Sheet pile driving	Nmax<50,Type II,shorter than 12m	nos	317	20,837	6,605,256	9.2	2,922.7	0	0	880,148	00-91
		Sheet pile pulling	Nmax<50,shorter than 12m	nos	317	11,788	3,736,844	5.4	1,696.0	0	0	502,734	00-92
		Steel sheet pile	TypeII	ton	237.75	927,504	220,514,076	0.0	0.0	0	0	18,346,771	Mat-163
		Depreciation	70%		-0.7	220,514,076	(154,359,853)	0.0	0.0	0	0	(12,842,739)	
	Subtotal					–	136,812,715	–	4,619	–	2,068,591	13,973,825	
	Pier_on Land	Concrete work for Pier(2)_On land	Class D	m3	142.8	91,335	13,042,572	0.0	0.0	0	0	1,085,142	00-78
	Column_24N/mm2_P01-3	Form work	for ordinal concrete_with&without rebar	m2	231.4	8,785	2,032,782	0.0	0.0	0	0	169,127	01-22
		Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	13.385	114,348	1,530,542	0.0	0.0	81,271	1,087,812	1,215,153	00-80
		Rebar work_SD345	Arranging D29-D32	ton	11.177	80,841	903,555	0.0	0.0	83,080	928,585	1,003,760	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	nos	13.385	128,135	1,715,081	0.0	0.0	0	0	142,694	00-83
		Rebar work_SD345	Assembling D29-D32	ton	11.177	78,633	878,879	0.0	0.0	0	0	73,122	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	6	137,517	825,105	0.0	0.0	0	0	68,648	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	0	17,532	0	0.0	0.0	0	0	0	00-86
		Supporting	Wedge type	m3	357.2	17,796	6,356,763	0.0	0.0	0	0	528,882	02-237
		Non-shrink Mortar	0	m3	0.6	2,565,045	1,539,027	0.0	0.0	0	0	128,047	02-229
	Subtotal					–	28,824,306	–	0	–	2,016,397	4,414,575	
	Approach slab	Concrete work	24N/mm2	m3	31.4	99,456	3,122,928	0.0	0.0	0	0	259,827	00-51
	A1	Rebar work_SD345	Arranging D13	ton	0.326	126,764	41,325	0.0	0.0	78,422	25,566	29,003	00-79
		Rebar work_SD345	Arranging D16-D25	ton	2.64	114,348	301,878	0.0	0.0	81,271	214,555	239,671	00-80
		Rebar work_SD345	Arranging D29-D32	ton	2.958	80,841	239,126	0.0	0.0	83,080	245,751	265,645	00-81
		Rebar work_SD345	Assembling D13	ton	0.326	154,137	50,249	0.0	0.0	0	0	4,180	00-82
		Rebar work_SD345	Assembling D16-D25	ton	2.64	128,135	338,275	0.0	0.0	0	0	28,144	00-83
		Rebar work_SD345	Assembling D29-D32	ton	2.958	78,633	232,596	0.0	0.0	0	0	19,351	00-84
		Form work	for ordinal concrete_with&without rebar	m2	9.8	8,785	86,090	0.0	0.0	0	0	7,162	01-22
	Subtotal					–	4,412,466	–	0	–	485,872	852,983	
	Approach slab	Concrete work	24N/mm2	m3	9.4	99,456	934,889	0.0	0.0	0	0	77,782	00-51
	A01	Rebar work_SD345	Arranging D13	ton	0.091	126,764	11,535	0.0	0.0	78,422	7,136	8,096	00-79
		Rebar work_SD345	Arranging D16-D25	ton	0.795	114,348	90,906	0.0	0.0	81,271	64,610	72,173	00-80
		Rebar work_SD345	Arranging D29-D32	ton	0.873	80,841	70,574	0.0	0.0	83,080	72,529	78,400	00-81
		Rebar work_SD345	Assembling D13	ton	0.091	154,137	14,026	0.0	0.0	0	0	1,167	00-82
		Rebar work_SD345	Assembling D16-D25	nos	0.795	128,135	101,867	0.0	0.0	0	0	8,475	00-83
		Rebar work_SD345	Assembling D29-D32	ton	0.873	78,633	68,646	0.0	0.0	0	0	5,711	00-84
		Form work	for ordinal concrete_with&without rebar	m2	2.6	8,785	22,840	0.0	0.0	0	0	1,900	01-22
	Subtotal					–	1,315,285	–	0	–	144,276	253,704	
	Bridge Name Plate Installation Works	PKG1		nos	1	1,902,479	1,902,479	0.0	0.0	0	0	158,286	00-119
	Subtotal					–	1,902,479	–	0	–	0	158,286	
	Inspection Ladder	PKG1		LS	1	121,803	121,803	0.0	0.0	1,017,125	1,017,125	1,027,259	PKG1-58
	Subtotal					–	121,803	–	0	–	1,017,125	1,027,259	
4. Superstructure		Cable stayed bridge		LS	1	–	3,403,246,473	–	1,021,633	–	3,794,834,868	4,193,541,882	
	Cable stayed bridge	Fabrication of steel tower		L.S.	1	0	0	0.0	0.0	256,185,318	256,185,318	256,185,317	Quatation
		Fabrication of steel girder		L.S.	1	0	0	0.0	0.0	2,020,904,953	2,020,904,953	2,020,904,952	Quatation
		Erection of tower		L.S.	1	449,679,433	449,679,433	335,004.8	335,004.8	2,039,100	2,039,100	77,344,826	00-98
		Erection of main girder	Side span	L.S.	1	1,553,014,709	1,553,014,709	686,628.2	686,628.2	149,729,066	149,729,066	356,604,410	00-99
		Erection of main girder	by erection nose for Main span(1 set)	each	2	77,170,000	154,340,000	0.0	0.0	91,534,000	183,068,000	195,909,088	00-181
		Stressing of PC cable	Cable stayed bridge	LS	1	275,119,479	275,119,479	0.0	0.0	339,991,090	339,991,090	362,881,030	00-100
		Steel deck welding in site	Automatic welding equipment	m	4909.68	98,825	485,198,733	0.0	0.0	17,132	84,113,178	124,481,712	01-83
		Dead-bolting including temporary e	Main girder	nos	186808	286	53,393,463	0.0	0.0	47	8,854,699	13,297,035	01-85
		Painting in site	Tower and Girder	LS	1	70,483,258	70,483,258	0.0	0.0	18,735,020	18,735,020	24,599,227	00-101
		Bearing setting	Cable stayed bridge	LS	1	16,100,461	16,100,461	0.0	0.0	564,030,000	564,030,000	565,369,558	00-102
		Expaansion Joint setting	Cable stayed bridge	LS	1	6,155,168	6,155,168	0.0	0.0	70,154,752	70,154,752	70,666,861	00-103
		Wheel Guard & Median Strip	Cast in site_Cable stayed bridge	LS	1	18,476,120	18,476,120	0.0	0.0	1,773,414	1,773,414	3,310,627	00-161
		Installation of barrier, railing		m	1790	4,312	7,718,050	0.0	0.0	0	0	642,141	01-134
		Barrier Fabrication	Cable Stayed Bridge	LS	1	2,678,046	2,678,046	0.0	0.0	42,608,778	42,608,778	42,831,591	01-135
		Drainage work	For Any	nos	140	13,704	1,918,587	0.0	0.0	53,767	7,527,380	7,687,006	00-106
		Stay Cable Damping Device	Setting and Material cost	nos	40	1,519	60,750	0.0	0.0	576,900	23,076,000	23,081,054	00-107
		Transportation in site(Block)	Special trailer 40 t	month	17	11,555,709	196,447,055	0.0	0.0	0	0	16,344,394	01-104
		Temporary placing	by 70 t CC	block	530	38,912	20,623,180	0.0	0.0	0	0	1,715,848	01-105
		Transportation in site(Segment&Co	by Carriage (carriage length: below 200m)	nos	107	294,178	31,477,048	0.0	0.0	0	0	2,618,890	01-107
		Loading on barge	by 200 t CC and 200 t TC	Time	107	319,983	34,238,128	0.0	0.0	0	0	2,848,612	01-108
		Facilities and Concrete Base for R	(Package-1)	LS	0.7	37,321,151	26,124,805	0.0	0.0	31,491,600	22,044,120	24,217,703	00-179
	Subtotal					–	3,403,246,473	–	1,021,633	–	3,794,834,868	4,193,541,882	

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
5. Superstructure		PC box girder_SBS_PKG1		LS	1	-	2,485,489,390	-	1,982,447	-	345,511,761	776,539,079	
	PC box girder_SBS_PKG1	Fabrication of precast segment	Short line matching method	LS	1	1,404,413,261	1,404,413,261	473,525.2	473,525.2	59,036,744	59,036,744	229,444,367	00-169
		Erection	Span by Span method	LS	1	603,971,201	603,971,201	0.0	0.0	129,689,896	129,689,896	179,940,299	00-170
		Prestressing		LS	1	267,627,792	267,627,792	0.0	0.0	85,126,364	85,126,364	107,392,996	00-171
		Bearing setting	PC Box(PKG1)	LS	1	19,011,307	19,011,307	1,508,922.0	1,508,922.0	0	0	172,255,908	00-172
		Expansion joint setting	PC Box	LS	1	2,343,822	2,343,822	0.0	0.0	25,065,000	25,065,000	25,260,006	00-173
		Wheel Guard & Median Strip	Cast in site_PC box_PKG1	LS	1	45,697,138	45,697,138	0.0	0.0	1,599,809	1,599,809	5,401,810	00-299
		Installation of barrier, railing		m	1000	4,312	4,311,760	0.0	0.0	0	0	358,738	01-134
		Barrier Fabrication	PC box	LS	1	1,494,349	1,494,349	0.0	0.0	23,775,698	23,775,698	23,900,027	00-175
		Drainage work	PC box	LS	1	15,287,574	15,287,574	0.0	0.0	1,397,943	1,397,943	2,669,869	00-176
		Manhole cover	PC box	nos	4	224,710	898,840	0.0	0.0	16,843	67,371	142,154	00-177
		Pier Head Cast in Place_temporary expense		pier	5	14,779,967	73,899,836	0.0	0.0	373,627	1,868,135	8,016,601	00-182
		Pier head temporary bearing		0	0	0	0	0.0	0.0	0	0	0	0.00
		Pier head temporary bearing	200 t hydraulic jack*16 nos/pier*6 month*30 days	nos-day	8640	0	0	0.0	0.0	2,070	17,884,800	17,884,800	CEDC_18-7_200-001
		Concrete cast in place		0	0	0	0	0.0	0.0	0	0	0	0.00
		Form fabrication, installation, and removal		m2	460	26,799	12,327,664	0.0	0.0	0	0	1,025,661	01-257
		Concrete (Cast-in-place)	50 Mpa	m3	300	114,016	34,204,845	0.0	0.0	0	0	2,845,843	01-259
	Subtotal				-	-	2,485,489,390	-	1,982,447	-	345,511,761	776,539,079	
6. Superstructure		PC-I girder Ramp PKG1		LS	1	-	346,833,655	-	14,821	-	22,774,292	53,307,270	
	PC-I girder_Ramp_PKG1	Post tension girder fabrication	PC-I girder_Ramp	nos	8	27,263,767	218,110,135	0.0	0.0	633,295	5,066,359	23,213,122	00-108
		PC-I girdr erection	160t Truck crane	nos	8	498,064	3,984,508	0.0	0.0	0	0	331,511	00-109
		PC pannel installation	PC-I girder_Ramp	LS	1	34,851,068	34,851,068	0.0	0.0	79,151	79,151	2,978,759	00-110
		Cross beam work	PC-I girder_Ramp	LS	1	32,510,284	32,510,284	0.0	0.0	5,629,396	5,629,396	8,334,251	00-111
		Slab work(Except for PC pannel)	PC-I girder_Ramp	set	1	39,202,893	39,202,893	0.0	0.0	4,141,972	4,141,972	7,403,652	00-112
		Bearing_Set	PC-I girder_Ramp	nos	14	62,526	875,357	0.0	0.0	0	0	72,829	00-113
		Bearing cost	for Ramp	LS	1	0	0	14,821.2	14,821.2	0	0	1,676,425	00-115
		Expansion Joint setting	for Ramp	m	5.25	31,635	166,084	0.0	0.0	0	0	13,818	00-114
		Expansion Joint cost	for Ramp	LS	1	0	0	0.0	0.0	433,755	433,755	433,755	00-122
		Handrail Side	H = 1100	m	230.5	4,312	993,861	0.0	0.0	0	0	82,689	01-134
		Barrier Fabrication	PC-I-girder_Ramp	LS	1	345,468	345,468	0.0	0.0	5,496,532	5,496,532	5,525,275	00-174
		Deck treatment	Waterproof layer	m2	603.9	970	585,523	0.0	0.0	2,138	1,290,836	1,339,551	00-116
		Drainage work	PC-I girder_Ramp	LS	1	2,787,268	2,787,268	0.0	0.0	322,602	322,602	554,502	00-117
		Wheel Guard & Median Strip	Cast in site_PKG1_Ramp	LS	1	8,318,325	8,318,325	0.0	0.0	313,688	313,688	1,005,772	00-298
		Leveling concrete		m3	43.1	95,194	4,102,881	0.0	0.0	0	0	341,359	00-52
	Subtotal				-	-	346,833,655	-	14,821	-	22,774,292	53,307,270	
7. Approach Road				LS	1	-	2,159,971,696	-	0	-	139,791,589	319,501,205	
	Approach road	Cutting&Dozing	by bulldozer for loose soil(sand)	m3	12267.6	1,347	16,523,230	0.0	0.0	0	0	1,374,732	00-18
	PKG1_Main road	Excavation&Loading	Loose sand_Backhoe-Full bucket0.6m3	m3	15334.5	1,154	17,703,527	0.0	0.0	0	0	1,472,933	00-4
		Backfilling	Class_C,1m<W1<4m_Borrow material	m3	1368	20,940	28,646,235	0.0	0.0	0	0	2,383,366	00-76
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	1285.1	16,802	21,591,672	0.0	0.0	0	0	1,796,427	01-179
		Cutting & Trimming slope	by machinery for loose soil(sand)	m2	17	2,584	43,920	0.0	0.0	0	0	3,654	00-37
		Shaping slope of embankment	By machinery for Sand soil	m2	2466.76	2,479	6,115,172	0.0	0.0	0	0	508,782	00-19
		Sodding	on slope	m2	2466.76	1,169	2,883,174	0.0	0.0	0	0	239,880	00-33
	Subtotal				-	-	93,506,930	-	0	-	0	7,779,774	
	Approach road	Cutting&Dozing	by bulldozer for loose soil(sand)	m3	1056	1,347	1,422,326	0.0	0.0	0	0	118,337	00-18
	PKG1_Ramp	Excavation&Loading	Loose sand_Backhoe-Full bucket0.6m3	m3	1320	1,154	1,523,927	0.0	0.0	0	0	126,790	00-4
		Backfilling	Class_C,1m<W1<4m_Borrow material	m3	879	20,940	18,406,462	0.0	0.0	0	0	1,531,417	00-76
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	1071.5	16,802	18,002,861	0.0	0.0	0	0	1,497,838	01-179
		Shaping slope of embankment	By machinery for Sand soil	m2	661	2,479	1,638,639	0.0	0.0	0	0	136,334	00-19
		Sodding	on slope	m2	661	1,169	772,583	0.0	0.0	0	0	64,278	00-33
	Subtotal				-	-	41,766,798	-	0	-	0	3,474,994	
	Soft Soil Treatment	Deep mixing method	2 axis φ1200_22-30m	set	266	34,984	9,305,717	0.0	0.0	91,476	24,332,616	25,106,851	00-316
	PKG1_Main road	Deep mixing method	2 axis φ1200_15-18m	set	372	26,674	9,922,802	0.0	0.0	81,312	30,248,064	31,073,641	00-317
		Cement material	Ordinal portland cement	t	11081	84,600	937,452,600	0.0	0.0	0	0	77,996,056	Mat-53
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	13627	16,802	228,954,722	0.0	0.0	0	0	19,049,032	01-179
		Sand mat	Sand mat for preloading	m3	2324	18,451	42,880,868	0.0	0.0	0	0	3,567,688	01-180
		Cement stabilization		m3	3583	4,574	16,386,851	0.0	0.0	0	0	1,363,385	00-15
		Cement material	Ordinal portland cement	t	824	84,600	69,710,400	0.0	0.0	0	0	5,799,905	Mat-166
	Subtotal				-	-	1,314,613,960	-	0	-	54,580,680	163,956,558	
	Soft Soil Treatment	Deep mixing method	2 axis φ1200_22-30m	set	247	34,984	8,641,023	0.0	0.0	91,476	22,594,572	23,313,505	00-316
	PKG1_Ramp	Cement material	Ordinal portland cement	t	5895	84,600	498,717,000	0.0	0.0	0	0	41,493,254	Mat-53
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	0	16,802	0	0.0	0.0	0	0	0	01-179
		Soil Cement Colmuns	(Preliminary Test Colums; Non-working Pile) including Field Test	LS	1	0	0	0.0	0.0	11,000,000	11,000,000	11,000,000	Quatation
		Cement stabilization		m3	1286	4,574	5,881,521	0.0	0.0	0	0	489,342	00-15
		Cement material	Ordinal portland cement	t	296	84,600	25,041,600	0.0	0.0	0	0	2,083,461	Mat-166
	Subtotal				-	-	538,281,144	-	0	-	33,594,572	78,379,562	
	Mechanically Stabilized Earth Wall	Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	m2	283.38	217,778	61,713,884	0.0	0.0	0	0	5,134,595	00-124
	PKG1_Main road	Reinforcement Material Installation	Reinforced Retaining Wall (Type 1)	m	2562	167	428,008	0.0	0.0	1,233	3,158,946	3,194,556	00-125
		Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	m3	619.2	2,233	1,382,568	0.0	0.0	0	0	115,029	00-126
		Concret work other material install	Reinforced Retaining Wall (Type 1)	LS	1	19,977,538	19,977,538	0.0	0.0	1,129,136	1,129,136	2,791,267	00-127
		Base concrete of Reinforced Retai	Base concrete	LS	1	2,582,232	2,582,232	0.0	0.0	0	0	214,841	00-128
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		Installation of barrier, railing	0	m	101.7	4,312	438,506	0.0	0.0	0	0	36,483	01-134
		Barrier Fabrication	on Mechanically Stabilized Earth Wall	LS	1	152,113	152,113	0.0	0.0	2,420,179	2,420,179	2,432,834	00-180
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
	Subtotal				-	-	86,674,849	-	0	-	6,708,261	13,919,605	
	Mechanically Stabilized Earth Wall	Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	m2	176.08	217,778	38,346,322	0.0	0.0	0	0	3,190,413	00-124
	PKG1_Ramp	Reinforcement Material Installation	Reinforced Retaining Wall (Type 1)	m	1664	167	277,988	0.0	0.0	1,233	2,051,712	2,074,840	00-125
		Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	m3	310.69	2,233	693,718	0.0	0.0	0	0	57,717	00-126
		Concret work other material install	Reinforced Retaining Wall (Type 1)_Ramp	LS	1	7,261,050	7,261,050	0.0	0.0	763,230	763,230	1,367,349	00-269
		Base concrete of Reinforced Retai	Base concrete_Ramp	LS	1	1,025,557	1,025,557	0.0	0.0	0	0	85,326	00-270
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		Installation of barrier, railing	0	m	38.975	4,312	168,051	0.0	0.0	0	0	13,981	01-134
		Barrier Fabrication	on Mechanically Stabilized Earth Wall_Ramp	LS	1	109,532	109,532	0.0	0.0	1,742,699	1,742,699	1,751,812	00-271
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
	Subtotal				-	-	47,882,218	-	0	-	4,557,641	8,541,438	
	Accessory_Approach road	Guard-pipe installation	Metal type(GP-A)	m	90.0	3,098	278,843	0.0	0.0	20,000	1,800,000	1,823,199	00-147
		Guard-rail installation	Metal type(GR-A)	m	533.4	3,098	1,652,560	0.0	0.0	30,000	16,001,550	16,139,042	00-129
		Guard-rail installation	Metal type(GR-B)	m	851.8	3,098	2,639,120	0.0	0.0	26,457	22,536,337	22,755,911	00-130
		Concrete Kerb Type A-1		lm	937.0	7,000	6,559,000	0.0	0.0	0	0	545,708	00-339
		Concrete Kerb Type A-2		Nos.	1.7	7,000	11,667	0.0	0.0	0	0	970	0.00
		Concrete Kerb Type A-3		lm	3.8	7,000	26,600	0.0	0.0	0	0	2,213	0.00
		Concrete Kerb Type B-1		lm	91.0	6,500	591,500	0.0	0.0	0	0	49,212	00-340
		Concrete Kerb Type B-2		Nos.	5.0	6,500	32,500	0.0	0.0	0	0	2,704	0.00
		Concrete Kerb Type B-3		lm	11.8	6,500	76,700	0.0	0.0	0	0	6,381	0.00
		Concrete Kerb Type D		lm	30.0	6,000	180,000	0.0	0.0	0	0	14,976	00-341
		Median Type C		lm	179.0	7,000	1,253,000	0.0	0.0	0	0	104,249	0.00
		unbroken ,white W=8cm		m	328.8	1,800	591,840	0.0	0.0	0	0	49,241	00-343
		unbroken ,white W=10cm		m	5,960.6	1,980	11,802,034	0.0	0.0	0	0	981,929	00-343
		unbroken ,white W=15cm		m	1,983.2	2,323	4,606,974	0.0	0.0	0	0	383,300	00-342
		unbroken ,white W=30cm		m	31.0	5,500	170,500	0.0	0.0	0	0	14,185	00-344
		unbroken ,white W=45cm		m	230.0	6,852	1,575,960	0.0	0.0	0	0	131,119	00-345
		broken ,white W=8cm		m	117.6	2,009	236,258	0.0	0.0	0	0	19,656	00-346
		broken ,white W=10cm		m	2,270.1	2,009	4,560,551	0.0	0.0	0	0	379,437	00-346
		Speed Limit Marks		each	1.0	3,903	3,903	0.0	0.0	0	0	324	0.00
		Arrow Mark ,white		each	25.0	3,903	97,575	0.0	0.0	0	0	8,118	00-347
		Regulatory Signs		nos	12.0	0	0	0.0	0.0	0	0	0	0.00
		Warning Signs		nos	10.0	0	0	0.0	0.0	0	0	0	0.00
		Informatory Signboards-TypeC		nos	2.0	0	0	0.0	0.0	0	0	0	0.00
		Lighting Foundation	Cast in site_PKG1_Approach_Main Road	LS	1.0	224,035	224,035	0.0	0.0	9,411	9,411	28,050	00-336
		Lighting Foundation	Cast in site_PKG1_Approach_Ramp	LS	1.0	74,678	74,678	0.0	0.0	3,137	3,137	9,350	00-337
	Subtotal				-	-	37,245,797	-	0	-	40,350,435	43,449,274	
8. Waterworks				LS	1	-	361,694,496	-	0	-	16,524,491	46,617,462	
	Drainage work_approach road	U-Ditch_with_cover	B/H=0.8/1.0m	m	16	186,737	2,987,784	0.0	0.0	2,219	35,509	284,092	00-237
	PKG1	U-Ditch_with_cover	B/H=0.8/0.8m	m	84.9	166,620	14,146,066	0.0	0.0	3,129	265,652	1,442,604	00-238
		U-Ditch_with_cover	B/H=0.5/0.85m	m	330.9	155,575	51,479,830	0.0	0.0	2,674	884,893	5,168,014	00-239
		U-Ditch_without_cover	B/H=1.0/1.0m	m	187.425	174,624	32,728,821	0.0	0.0	2,831	530,600	3,253,638	00-242
		U-Ditch_without_cover	B/H=0.8/0.8m	m	1227	139,425	171,074,266	0.0	0.0	2,133	2,617,314	16,850,692	00-243
		U-Ditch_without_cover	B/H=0.5/0.5m	m	181	94,645	17,130,707	0.0	0.0	1,545	279,627	1,704,901	00-244
		U-Ditch_without_cover	B/H=0.3/0.3m	m	78.78	50,923	4,011,697	0.0	0.0	0	0	333,773	00-272
		Catch Pit	B/L=1.2/1.2m,H=1.6m	nos	12	814,506	9,774,066	0.0	0.0	9,254	111,048	924,250	00-245
		Catch Pit	B/L=1.0/1.0m,H=1.35m	nos	14	613,844	8,593,819	0.0	0.0	6,901	96,614	811,619	00-246
		Catch Pit	B/L=0.7/0.7m,H=2.25m	nos	1	1,207,406	1,207,406	0.0	0.0	9,097	9,097	109,553	00-247
		Catch Pit	B/L=0.7/0.7m,H=1.85m	nos	3	944,186	2,832,557	0.0	0.0	7,764	23,292	258,960	00-248
		Catch Pit	B/L=0.7/0.7m,H=1.05m	nos	3	346,220	1,038,659	0.0	0.0	3,764	11,292	97,708	00-249
		Catch Pit	B/L=0.5/0.5m,H=0.7m	nos	3	94,026	282,079	0.0	0.0	0	0	23,468	00-252
		Catch Pit	B/L=0.6/0.4m,H=0.5m	nos	5	174,374	871,870	0.0	0.0	0	0	72,539	00-253
		Pipe culvert	φ0.3m,360° concreted_B	m	70	58,156	4,070,904	0.0	0.0	1,145	80,150	418,849	00-255
		Pipe culvert	φ0.9m,360° concreted	m	44.63	434,129	19,375,186	0.0	0.0	5,850	261,099	1,873,114	00-139
		Box Culvert fabrication	1000*1000	m	20.7	247,447	5,122,156	0.0	0.0	9,564	197,975	624,138	01-261
		Vertical Drain	TypeA_PKG1	LS	1	607,739	607,739	0.0	0.0	0	0	50,563	00-259
		Setting of Flap Gate	1000*1000	set	2	872,286	1,744,573	0.0	0.0	5,392,800	10,785,600	10,930,748	01-263
		Outlet_TypeA_Left	PKG1	LS	1	6,318,892	6,318,892	0.0	0.0	167,365	167,365	693,096	00-256
		Outlet_TypeA_Right	PKG1	LS	1	6,295,419	6,295,419	0.0	0.0	167,365	167,365	691,143	00-324
		Vertical drain typeC	PVCφ150	m	0	31,641	0	0.0	0.0	0	0	0	Mat-29
	Subtotal				-	-	361,694,496	-	0	-	16,524,491	46,617,462	
9. Pavement				LS	1	-	1,102,580,267	-	0	-	106,866,475	198,601,142	
	Pavement on bridge surface	Pavement	on Steel deck	m2	8028	62,136	498,828,450	0.0	0.0	11,888	95,434,295	136,936,822	
	PKG1	Pavement	on Concrete deck	m2	5095	18,541	94,464,408	0.0	0.0	2,138	10,890,563	18,750,001	00-324
	Subtotal				-	-	593,292,858	-	0	-	106,324,858	155,686,823	
	Pavement_Approach_road_main	Pavement_Levelling	Roadbed & subgrade	m2	9104	597	5,431,264	0.0	0.0	0	0	451,881	00-5
		Road base	Subbase course t=500mm	m2	4806	10,005	48,083,261	0.0	0.0	0	0	4,000,527	00-266
		Road base	Subbase course t=350mm	m2	4298	6,905	29,679,194	0.0	0.0	0	0	2,469,308	00-265
		Road base	Base course t=250mm	m2	8670	7,814	67,743,565	0.0	0.0	0	0	5,636,264	00-262
		Pavement	Binder course t=50mm W>=3m, including prime coat	m2	8457	11,383	96,263,917	0.0	0.0	0	0	8,009,157	00-9
		Pavement	Surface course t=50mmW>=3.0m, including tack coat	m2	8250	10,909	89,998,838	0.0	0.0	0	0	7,487,903	00-8
	Subtotal				-	-	337,200,039	-	0	-	0	28,055,040	
	Pavement_Approach_road_access	Pavement_Levelling	Roadbed & subgrade	m2	984	597	587,035	0.0	0.0	0	0	48,841	00-5
	Yangon access line	Pavement	Subbase course t=150mm	m2	984	3,099	3,049,898	0.0	0.0	0	0	253,751	00-7
		Pavement	Base course t=150mm	m2	939	4,492	4,218,054	0.0	0.0	0	0	350,942	00-6
		Pavement	Binder course t=50mm W>=3m, including prime coat	m2	908	11,383	10,335,537	0.0	0.0	0	0	859,916	00-9
		Pavement	Surface course t=50mmW>=3.0m, including tack coat	m2	908	10,909	9,905,327	0.0	0.0	0	0	824,123	00-8
	Subtotal				-	-	28,095,850	-	0	-	0	2,337,573	
	Pavement_Approach_road_access	Pavement_Levelling	Roadbed & subgrade	m2	1125	597	671,153	0.0	0.0	0	0	55,839	00-5
	Thilawa access line	Pavement	Subbase course t=150mm	m2	1125	3,099	3,486,926	0.0	0.0	0	0	290,112	00-7
		Pavement	Base course t=150mm	m2	1077	4,492	4,837,959	0.0	0.0	0	0	402,518	00-6
		Pavement	Binder course t=50mm W>=3m, including prime coat	m2	1045.6	11,383	11,901,803	0.0	0.0	0	0	990,230	00-9
		Pavement	Surface course t=50mmW>=3.0m, including tack coat	m2	1046	10,909	11,410,762	0.0	0.0	0	0	949,375	00-8
	Subtotal				-	-	32,308,603	-	0	-	0	2,688,074	
	Pavement_Rigid_Approach_road_St	PKG1	t=200mm	LS	1	30,925,000	30,925,000	0.0	0.0	541,617	541,617	3,114,576	PKG1-39
	Subtotal				-	-	30,925,000	-	0	-	541,617	3,114,576	
	Pavement_Side walk_Approach_roa	Star Sity Access Pavement(Side Walk)		m2	46.4	120,000	5,568,000	0.0	0.0	0	0	463,257	
		Side Walk Pavement		m2	0	240,000	0	0.0	0.0	0	0	0	
	Subtotal				-	-	5,568,000	-	0	-	0	463,257	
	Pavement_Approach_road_Ramp	Pavement_Levelling	Roadbed & subgrade	m2	2638	597	1,573,778	0.0	0.0	0	0	130,938	00-5
	PKG1	Pavement	Subbase course t=150mm	m2	2638	3,099	8,176,455	0.0	0.0	0	0	680,281	00-7
		Pavement	Base course t=150mm	m2	2578	4,492	11,580,556	0.0	0.0	0	0	963,502	00-6
		Pavement	Binder course t=50mm W>=3m, including prime coat	m2	2398	11,383	27,295,835	0.0	0.0	0	0	2,271,013	00-9
		Pavement	Surface course t=50mmW>=3.0m, including tack coat	m2	2435	10,909	26,563,293	0.0	0.0	0	0	2,210,065	00-8
	Subtotal				-	-	75,189,917	-	0	-	0	6,255,799	
10. Electrical work				LS	1	-	0	-	0	-	160,462,724	160,462,724	
	PKG1	Lightning work	PKG1	LS	1	0	0	0.0	0.0	102,178,440	102,178,440	102,178,440	00-307
		Traffic signal work	PKG1	LS	1	0	0	0.0	0.0	11,220,686	11,220,686	11,220,686	00-308
		Power supply equipment	PKG1	LS	1	0	0	0.0	0.0	16,329,619	16,329,619	16,329,619	00-309
		Illumination for tower	PKG1	LS	1	0	0	0.0	0.0	8,005,635	8,005,635	8,005,635	00-310
		Obstacle light	PKG1	LS	1	0	0	0.0	0.0	4,542,453	4,542,453	4,542,453	00-311
		Navigation sign & light	PKG1	LS	1	0	0	0.0	0.0	17,759,561	17,759,561	17,759,561	00-312
		Lightning conductor	PKG1	LS	1	0	0	0.0	0.0	426,330	426,330	426,330	00-313
	Subtotal				-	-	0	-	0	-	160,462,724	160,462,724	

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
11.	Design Change			LS	1	–	3,171,194,871	–	4,232,120	–	1,729,611,656	2,472,150,095	
	Foundation_SPSP(P7)	Guide(Design change)	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	nos	28	302,319	8,464,943	668.4	18,716.3	36,092	1,010,584	3,831,870	00-339
	3 spans Steel box girder const. fr	Guide(Design change)	Guide(Frame)Falswork_Install	t	15	77,660	1,164,899	1,924.2	28,863.0	19,736	296,033	3,657,646	00-340
		Steel Pipe Sheet Pile Driving(Desig	Steel Box(350 t CC & 275 t CC)	LS	1	222,417,413	222,417,413	928,402.8	928,402.8	0	0	123,516,774	00-341
		Material cost_P7(Design change)	Steel Pipe Sheet Pile	LS	1	0	0	946,921.2	946,921.2	0	0	107,106,254	00-342
		Excavation inside of the pipe pile		m3	354	91,385	32,350,286	0.0	0.0	0	0	2,691,543	00-61
		Concrete Filling to Steel Pipe		m3	301.1	116,062	34,946,157	0.0	0.0	0	0	2,907,520	00-62
		Cleaning of Inside joint pipe		m	1800.5	7,453	13,419,271	1.4	2,556.7	0	0	1,405,672	00-63
		Mortar filling of Inside joint pipe		m	1813.4	3,457	6,269,613	0.0	0.0	103	186,798	708,430	00-64
		Sealing of Inside joint pipe	P-P_type	m	348.5	1,854	646,269	0.0	0.0	621	216,324	270,093	00-65
		Excavation inside of the well		m3	807.4	22,464	18,137,296	6.5	5,248.1	0	0	2,102,635	00-66
		Spread sand		m3	52.3	53,032	2,773,552	10.0	522.5	0	0	289,856	00-67
		Bottom slab concrete		m3	228	138,022	31,468,945	0.0	0.0	0	0	2,618,216	00-68
		Falswork Install / Remove	Install65%,Remove35%	t	68.2	771,851	52,640,223	0.0	0.0	20,125	1,372,539	5,752,205	00-69
		Concrete filling to space between	steel pipe well and wale	m3	19.8	671,092	13,287,620	0.0	0.0	0	0	1,105,529	00-70
		Welding of the dowel	Stud welding_1,000mm 1 row 4nos	nos	253.44	7,286	1,846,445	0.0	0.0	2,994	758,794	912,418	00-71
		Welding of the dowel	Stud welding_700mm 1 row 4nos	nos	514.56	7,286	3,748,842	0.0	0.0	2,819	1,450,622	1,762,525	00-72
		Steel pipe sheet pile Cut&Removal		nos	36	342,320	12,323,506	15.0	539.6	0	0	1,086,354	00-73
	Subtotal					–	–		455,905,280	–	1,931,770	–	5,291,694	261,725,540	
	Foundation_SPSP(P6)	Guide_(Design change)	Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty_P6	nos	32	203,686	6,517,947	55.1	1,763.2	65,902	2,108,851	2,850,579	00-343
	3 spans Steel box girder const. fr	Guide_(Design change)	Guide(Frame)Falswork_Install_from Jetty_P6	t	10.4	320,266	3,330,769	0.0	0.0	19,736	205,249	482,369	00-344
		Steel Pipe Sheet Pile Driving_(Desig	from Jetty_P6	LS	1	209,243,312	209,243,312	99,123.9	99,123.9	0	0	28,620,952	00-345
		Material cost_from Jetty_P6(Desig	Steel Pipe Sheet Pile	LS	1	0	0	851,262.1	851,262.1	0	0	96,286,260	00-346
		Excavation inside of the pipe pile		m3	374.1	91,385	34,187,125	0.0	0.0	0	0	2,844,368	00-61
		Concrete Filling to Steel Pipe		m3	319.9	116,062	37,128,115	0.0	0.0	0	0	3,089,059	00-62
		Cleaning of Inside joint pipe		m	1738.7	7,453	12,958,670	1.4	2,469.0	0	0	1,357,424	00-63
		Mortar filling of Inside joint pipe		m	1679.9	3,457	5,808,053	0.0	0.0	103	173,046	656,276	00-64
		Sealing of Inside joint pipe	P-P_type	m	271.7	1,854	503,849	0.0	0.0	621	168,652	210,572	00-65
		Excavation inside of the well		m3	993.2	22,464	22,311,076	6.5	6,455.8	0	0	2,586,497	00-66
		Spread sand		m3	60.4	53,032	3,203,108	10.0	603.4	0	0	334,748	00-67
		Bottom slab concrete		m3	263.1	138,022	36,313,507	0.0	0.0	0	0	3,021,283	00-68
		Falswork Install / Remove	Install65%,Remove35%	t	49.9	771,851	38,515,353	0.0	0.0	20,125	1,004,247	4,208,724	00-69
		Concrete filling to space between	steel pipe well and wale	m3	17.4	671,092	11,676,999	0.0	0.0	0	0	971,526	00-70
		Welding of the dowel	Stud welding_1,000mm 1 row 4nos	nos	291.72	7,286	2,125,335	0.0	0.0	2,994	873,404	1,050,231	00-71
		Welding of the dowel	Stud welding_700mm 1 row 4nos	nos	456.28	7,286	3,324,242	0.0	0.0	2,819	1,286,322	1,562,898	00-72
		Steel pipe sheet pile Cut&Removal		nos	34	342,320	11,638,867	15.0	509.7	0	0	1,026,001	00-73
	Subtotal					–	–		438,786,327	–	962,187	–	5,819,772	151,159,767	
	Pier_on River	Pile cap_on River	Class D	m3	924.6	105,754	97,780,213	0.0	0.0	0	0	8,135,313	00-50
	Pile cap(Design change)	Rebar work_SD345	Arranging D13	ton	0.168	126,764	21,296	0.0	0.0	78,422	13,175	14,946	00-79
		Rebar work_SD345	Arranging D16-D25	ton	12.025	114,348	1,375,030	0.0	0.0	81,271	977,284	1,091,686	00-80
		Rebar work_SD345	Arranging D29-D32	ton	28.885	80,841	2,335,080	0.0	0.0	83,080	2,399,766	2,594,044	00-81
		Rebar work_SD345	Assembling D13	ton	0.168	154,137	25,895	0.0	0.0	0	0	2,154	00-82
		Rebar work_SD345	Assembling D16-D25	ton	12.025	128,135	1,540,818	0.0	0.0	0	0	128,196	00-83
		Rebar work_SD345	Assembling D29-D32	ton	28.885	78,633	2,271,308	0.0	0.0	0	0	188,972	00-84
		Rebar work_SD345	Arranging D38	ton	17.76	126,764	2,251,320	0.0	0.0	81,271	1,443,373	1,630,682	00-226
		Rebar work_SD345	Arranging D51	ton	0	126,764	0	0.0	0.0	83,080	0	0	00-228
		Rebar work_SD345	Assembling D38	ton	17.76	154,137	2,737,472	0.0	0.0	0	0	227,757	00-230
		Rebar work_SD345	Assembling D51	ton	0	154,137	0	0.0	0.0	0	0	0	00-232
		Mechanical joint	D35, deformed bar	nos	0	0	0	0.0	0.0	2,493	0	0	Mat-292
		Mechanical joint	D38, deformed bar	nos	82	0	0	0.0	0.0	3,006	246,492	246,492	Mat-293
		Mechanical joint	D51, deformed bar	nos	0	0	0	0.0	0.0	5,832	0	0	Mat-295
		Crawler crane	50～55t hang	day	63	297,147	18,720,274	0.0	0.0		0	1,557,526	OPE-26
		Barge	800t	day	63	1,388,221	87,457,933	0.0	0.0	0	0	7,276,500	Mac-d(20)
		Rebar work_SD345	Arranging D35	ton	0	126,764	0	0.0	0.0	80,321	0	0	00-225
		Rebar work_SD345	Assembling D35	ton	0	154,137	0	0.0	0.0	0	0	0	00-229
	Subtotal					–	–		216,516,638	–	0	–	5,080,089	23,094,268	
	Pier_on River	Concrete work for Pier(2)_On rive	Class C I	m3	1572.4	111,351	175,088,218	0.0	0.0	0	0	14,567,339	00-89
	Column_30N/mm2(Design change	Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	97.473	114,348	11,145,801	0.0	0.0	81,271	7,921,728	8,849,058	00-80
		Rebar work_SD345	Arranging D29-D32	ton	56.141	80,841	4,538,470	0.0	0.0	83,080	4,664,194	5,041,795	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	ton	97.473	128,135	12,489,662	0.0	0.0	0	0	1,039,139	00-83
		Rebar work_SD345	Assembling D29-D32	ton	56.141	78,633	4,414,523	0.0	0.0	0	0	367,288	00-84
		Rebar work_SD345	Arranging D38	ton	59.792	126,764	7,579,444	0.0	0.0	81,271	4,859,356	5,489,965	00-226
		Rebar work_SD345	Arranging D51	ton	0	126,764	0	0.0	0.0	83,080	0	0	00-228
		Rebar work_SD345	Assembling D38	ton	59.792	154,137	9,216,155	0.0	0.0	0	0	766,784	00-230
		Rebar work_SD345	Assembling D51	ton	0	154,137	0	0.0	0.0	0	0	0	00-232
		Mechanical joint	D32, deformed bar	nos	422	0	0	0.0	0.0	1,818	767,196	767,196	Mat-294
		Mechanical joint	D38, deformed bar	nos	342	0	0	0.0	0.0	3,006	1,028,052	1,028,052	Mat-293
		Crawler crane	50～55t hang	day	90	297,147	26,743,248	0.0	0.0		0	2,225,038	OPE-26
		Barge	800t	day	90	1,388,221	124,939,904	0.0	0.0	0	0	10,395,000	Mac-d(20)
		Non-shrink Mortar		m3	4.743	2,565,045	12,166,008	0.0	0.0	0	0	1,012,211	02-229
		Form work	Ordinal type	m2	910.6	13,806	12,572,153	0.0	0.0	0	0	1,046,003	00-156
		Form work	Plywood curved panel	m2	341.6	17,762	6,067,363	0.0	0.0	0	0	504,804	00-157
		Scaffolding	Hand rail precede type	m2	1691	9,747	16,481,484	0.0	0.0	289	488,073	1,859,332	00-158
		Supporting	Wedge type	m3	186	17,796	3,310,073	0.0	0.0	0	0	275,398	02-237
		Bracket support_PKG1(Design cha	Pierhead_coping	LS	1	194,493,937	194,493,937	0.0	0.0	0	0	16,181,895	00-347
		Installation of barrier, railing		m	186.6	4,312	804,574	0.0	0.0	0	0	66,940	01-134
	Subtotal					–	–		622,051,018	–	0	–	19,728,599	71,483,237	
	Superstructure	Fabrication of steel girder		L.S.	1	0	0	0.0	0.0	1,396,351,758	1,396,351,758	1,396,351,757	Quatation
	3 spans Steel box girder (Design	Erection of girder(P5-6)	3 spans Steel box girder (Design change)	L.S.	1	237,119,766	237,119,766	0.0	0.0	4,560,880	4,560,880	24,289,244	00-349
		Erection of main girder(P6-7,7-8)	3 spans Steel box girder (Design change)	L.S.	1	592,342,808	592,342,808	235,052.5	235,052.5	122,993,209	122,993,209	198,862,915	00-350
		Dead-bolting including temporary e	3 spans Steel box girder (Design change)	nos	244308	286	69,828,113	0.0	0.0	47	11,580,199	17,389,898	01-281
		Painting in site	3 spans Steel box girder (Design change)	LS	1	67,778,093	67,778,093	0.0	0.0	17,059,794	17,059,794	22,698,931	00-351
		Bearing setting	3 spans Steel box girder (Design change)	LS	1	15,269,352	15,269,352	1,103,109.9	1,103,109.9	0	0	126,043,173	00-352
		Expaansion Joint setting	3 spans Steel box girder (Design change)	LS	1	3,969,601	3,969,601	0.0	0.0	33,483,992	33,483,992	33,814,262	00-353
		Wheel Guard & Median Strip	Cast in site for 3 spans Steel box girder (Design change)	LS	1	38,096,154	38,096,154	0.0	0.0	1,781,320	1,781,320	4,950,920	00-354
		Installation of barrier, railing		m	1190.38932	4,312	5,132,673	0.0	0.0	0	0	427,038	01-134
		Barrier fabrication	3 spans Steel box girder (Design change)	m	1190.38932	0	0	0.0	0.0	22,647	26,958,806	26,958,806	01-303
		Drainage work	For Any	nos	57.9933259	13,704	794,752	0.0	0.0	53,767	3,118,127	3,184,250	00-106
		Transportation in site	Special trailer 60 t	month	2	13,594,952	27,189,904	0.0	0.0	0	0	2,262,199	01-213
		Temporary placing	by 70 t CC	block	136	38,912	5,291,986	0.0	0.0	0	0	440,293	01-105
		Transportation in site(Segment&Co	by Carriage (carriage length: below 200m)	nos	68	294,178	20,004,105	0.0	0.0	0	0	1,664,341	01-107
		Loading on barge	by 200 t CC and 200 t TC	Time	68	319,983	21,758,810	0.0	0.0	0	0	1,810,332	01-108
		Facilities and Concrete Base for R	(Package-1)	LS	0.3	37,321,151	11,196,345	0.0	0.0	31,491,600	9,447,480	10,379,015	00-179
		Accessory&Miscellaneous work	3 spans Steel box girder (Design change)	LS	1	0	0	0.0	0.0	4,720,692	4,720,692	4,720,692	00-355
	Subtotal					–	–		1,115,772,461	–	1,338,162	–	1,632,056,258	1,876,248,066	
	Pavement on bridge surface 3 spans Steel box girder (Design change)	Pavement	on Steel deck	m2	5,185	62,136	322,163,148	0.0	0.0	11,888	61,635,243	88,439,217	00-334
	Subtotal					–	–		322,163,148	–	0	–	61,635,243	88,439,217	
12.	General temp. work cost			LS	1	–	4,932,468,194	–	3,688,908	–	488,792,411	1,316,426,144	
	Rate Calculation	–	GTP_PKG1	LS	1	0	0	0.0	0.0	218,572,085	218,572,085	218,572,085	GTW-1
	Material shipping cost	–	Yokohama or Vietnam-Yangon	LS	1	10,441,630	10,441,630	2,817,500.0	2,817,500.0	77,044,202	77,044,202	396,600,370	GTW-2
	Machinery shipping cost	–	Yokohama or Singapole-Yangon	LS	1	96,853,000	96,853,000	799,000.0	799,000.0	175,431,524	175,431,524	273,864,583	GTW-3
	Assembly & Disassembly	–	Machinery	LS	1	0	0	0.0	0.0	2,300,600	2,300,600	2,300,600	GTW-4
	Cutting and disposing tree	–	PKG1	LS	1	397,578	397,578	0.0	0.0	0	0	33,078	GTW-5
	Reclamation for yard	–	PKG1	LS	0	1,275,534,608	0	7,356.2	0.0	0	0	0	GTW-7
	Safety Related Cost for Navigation	–	Guard Boat, Buoy	LS	1	321,720,000	321,720,000	25,200.0	25,200.0	0	0	29,617,476	GTW-15
	Safety Related Cost for Traffic	–	Guardman/Traffic signboard	LS	1	45,187,000	45,187,000	0.0	0.0	0	0	3,759,558	GTW-16
	Safety Related Cost for Traffic	–	Temporary fence	LS	1	22,737,800	22,737,800	0.0	0.0	0	0	1,891,784	GTW-17
	Site administration cost	–	Electricity/Water well	LS	1	84,850,000	84,850,000	15,000.0	15,000.0	0	0	8,756,170	GTW-18
	Quality control test	–	0.00	LS	1	262,812,100	262,812,100	32,208.0	32,208.0	15,444,000	15,444,000	40,953,013	GTW-19
	Site expense	–	Installation/Remove, Maintenance	LS	1	10,610,000	10,610,000	0.0	0.0	0	0	882,752	GTW-20
	Equipment for General Use	–	PKG1	LS	1	4,074,429,087	4,074,429,087	0.0	0.0	0	0	338,992,499	GTW-21
	Others	–	Project information board	LS	1	2,430,000	2,430,000	0.0	0.0	0	0	202,176	GTW-22
13.	Site expenses(Site management cost)			LS	1	–	1,295,914,000	–	379,600	–	1,178,790,453	1,329,547,050	
	Airfare for Engineer	–		LS	1	0	0	0.0	0.0	19,774,500	19,774,500	19,774,500	SMC-1
	Airfare for Experts	–		LS	1	0	0	0.0	0.0	7,112,540	7,112,540	7,112,540	SMC-2
	Overseas Remuneration	–		LS	1	0	0	0.0	0.0	331,436,000	331,436,000	331,436,000	SMC-3
	Overseas Remuneration	–		LS	1	0	0	0.0	0.0	140,313,000	140,313,000	140,313,000	SMC-4
	Allowance	–		LS	1	0	0	0.0	0.0	50,512,680	50,512,680	50,512,680	SMC-5
	Allowance	–		LS	1	0	0	0.0	0.0	198,861,600	198,861,600	198,861,600	SMC-6
	Accomodation cost	–		LS	1	0	0	0.0	0.0	143,808,000	143,808,000	143,808,000	SMC-7
	Experts from 3rd country	–		LS	1	0	0	231,000.0	231,000.0	0	0	26,128,410	SMC-8
	Airfare from 3rd country	–		LS	1	0	0	0.0	0.0	951,000	951,000	951,000	SMC-9
	Allowance	–		LS	1	0	0	138,600.0	138,600.0	0	0	15,677,046	SMC-10
	Accomodation cost	–		LS	1	0	0	0.0	0.0	46,458,000	46,458,000	46,458,000	SMC-11
	Accomodation cost	–		LS	1	0	0	0.0	0.0	37,375,200	37,375,200	37,375,200	SMC-12
	Local staff Remuneration	–		LS	1	1,273,056,000	1,273,056,000	0.0	0.0	0	0	105,918,259	SMC-13
	Welfare expense	–		LS	1	0	0	0.0	0.0	4,182,167	4,182,167	4,182,166	SMC-14
	Office supplies	–		LS	1	0	0	0.0	0.0	14,786,947	14,786,947	14,786,946	SMC-15
	Communication cost	–		LS	1	0	0	0.0	0.0	5,526,435	5,526,435	5,526,434	SMC-16
	Social expenses	–		LS	1	0	0	0.0	0.0	5,327,288	5,327,288	5,327,288	SMC-17
	Car Rental Cost	–		LS	1	0	0	0.0	0.0	169,461,760	169,461,760	169,461,760	SMC-18
	Cost for Meeting of Defect Inspection	–		LS	1	0	0	0.0	0.0	2,138,320	2,138,320	2,138,320	SMC-19
	HIV Prevension Program	–		LS	1	22,858,000	22,858,000	0.0	0.0	0	0	1,901,785	SMC-20
	Monitoring equipment setting_Engineer cost	–		LS	1	0	0	0.0	0.0	765,016	765,016	765,016	SMC-21
	Environmental monitoring cost	–		LS	1	0	0	10,000.0	10,000.0	0	0	1,131,100	SMC-22
14.	Overhead cost			LS	1	0	0	0.0	0.0	1,005,876,188	1,005,876,188	1,005,876,188	OHC-1
15.	Dispute board			LS	1	0	0	0.0	0.0	70,034,400	70,034,400	70,034,400	

Table-3-4

Civil Works Construction Cost Breakdown_Package2

Category	Item	Unit	Quantity	Local(MMK) Subtotal	Main(USD) Subtotal	Yen(JPY) Subtotal	Total Yen conv.	Item Conditions
Civil Works Construction Cost_Package2		LS	1	32,988,069,416	14,502,196	7,820,949,224	12,205,899,817	
1. Preparation Works *Considered as General Temporary		LS	1	2,274,504,096	14,266	163,949,529	354,801,895	
2. Foundation		LS	1	8,435,619,592	7,839,113	151,943,174	1,740,468,779	
3. Substructure		LS	1	4,195,914,537	14,402	176,863,549	527,592,558	
4. Superstructure	Steel box girder bridge	LS	1	3,595,221,052	1,513,125	3,996,079,298	4,466,351,282	
5. Superstructure	PC box girder_SBS_PKG2	LS	1	2,745,466,075	2,347,160	390,943,627	884,853,625	
6. Approach Road		LS	1	5,184,170,414	0	154,347,367	585,670,327	
7. Waterworks		LS	1	697,190,988	0	25,447,112	83,453,393	
8. Pavement		LS	1	1,536,945,611	0	181,308,787	309,182,658	
9. Electrical work		LS	1	0	0	113,632,501	113,632,501	
10. Toll Plaza		LS	1	0	0	251,261,754	251,261,754	
11. General temp. work cost		LS	1	3,311,687,052	2,481,730	311,780,297	868,021,136	
12. Site expenses(Site management cost)		LS	1	1,011,350,000	292,400	996,121,045	1,113,338,726	
13. Overhead cost		LS	1	0	0	837,236,783	837,236,783	OHC-2
14. Dispute board		LS	1	0	0	70,034,400	70,034,400	

Table-3-5

Civil Works Construction Cost Breakdown_Package2

Cost Estimate Date/Bidding Date	May2017/＊＊
Country	Myanmar
Project title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Exchange Rate	1USD=113.11YPY、1MMK=0.0832YPY

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
Civil Works Construction Cost Package2				LS	1	-	32,988,069,416	-	14,502,196	-	7,820,949,224	12,205,899,817	
1. Preparation Works ＊Considered as General Temporary Works				LS	1	-	2,274,504,096	-	14,266	-	163,949,529	354,801,895	
	Temporary Road	Temporary road	Type A	m2	2375	27,380	65,028,331	0.0	0.0	0	0	5,410,357	00-191
	PKG2	Temporary road	Type B	m2	2718	30,480	82,844,205	0.0	0.0	0	0	6,892,637	00-6
		Temporary road	Type C	m2	4792	43,245	207,231,238	0.0	0.0	0	0	17,241,639	00-7
		Cement stabilization		m3	3062	4,574	14,004,057	0.0	0.0	0	0	1,165,137	00-15
		Cement material	Flexible container bag	ton	183.72	84,600	15,542,712	0.0	0.0	0	0	1,293,153	Mat-166
	Subtotal					-	-	384,650,543	-	0	-	0	32,002,923	
	Diversion Road	Diversion road	Section-1	m2	260	62,275	16,191,396	0.0	0.0	0	0	1,347,124	00-197
	PKG2	Diversion road	Section-2	m2	0	102,686	0	0.0	0.0	0	0	0	00-198
		Diversion road	Section-3	m2	408	62,275	25,408,037	0.0	0.0	0	0	2,113,948	00-199
	Subtotal					-	-	41,599,433	-	0	-	0	3,461,072	
	Temporary_Jetty	Temporary_Jetty	Superstructure_Installation	t	240.2	448,742	107,787,898	0.0	0.0	0	0	8,967,953	00-24
	Jetty Thateta	Temporary_Jetty	Deck pannel	m2	880	33,187	29,204,842	0.0	0.0	0	0	2,429,842	00-25
		Temporary_Jetty	Guared rail installation	m	382	1,021	389,869	0.0	0.0	0	0	32,437	00-26
		Temporary_Jetty	H400_L=40.7m_Pile_Driving_25m	nos	110	1,693,266	186,259,219	0.0	0.0	0	0	15,496,767	00-27
		Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	t	124.84	686,036	85,644,785	0.0	0.0	0	0	7,125,646	00-28
		Temporary Jetty	Guide(Pile)install_Driving_below13m H300	nos	88	483,790	42,573,536	0.0	0.0	0	0	3,542,118	00-29
		Temporary Jetty	Guide(Frame)Install / Remove	nos	110	212,361	23,359,733	0.0	0.0	0	0	1,943,529	00-30
		Temporary Jetty	Guide(Pile)Pulling_below13m H300	nos	88	260,502	22,924,211	0.0	0.0	0	0	1,907,294	00-31
		Temporary Jetty	Remove superstructure	t	240.2	245,450	58,957,150	0.0	0.0	0	0	4,905,234	00-149
		Temporary Jetty	Remove_deck pannel	m2	880	16,689	14,686,672	0.0	0.0	0	0	1,221,931	00-150
		Temporary Jetty	Remove_Gurad rail	m	382	966	368,985	0.0	0.0	0	0	30,699	00-151
		Temporary Jetty	H400_L=40m_Pile remove_Pulling25m	nos	110	317,421	34,916,355	0.0	0.0	0	0	2,905,040	00-152
		Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	t	124.84	477,209	59,574,733	0.0	0.0	0	0	4,956,617	00-153
		Temprary Jetty Thaketa	Material	LS	1	0	0	0.0	0.0	159,572,654	159,572,654	159,572,654	00-250
	Subtotal					-	-	666,647,989	-	0	-	159,572,654	215,037,761	
	Temporary_Jetty	Temporary_Jetty	Superstructure_Installation	t	18.11	448,742	8,126,723	0.0	0.0	0	0	676,143	00-24
	for Concrete transportation	Temporary_Jetty	Guared rail installation	m	71.2	1,021	72,667	0.0	0.0	0	0	6,045	00-26
		Temporary_Jetty	H400_L=27.5m_Pile install_Driving_20m	nos	39	1,128,844	44,024,907	0.0	0.0	0	0	3,662,872	00-207
		Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	t	9.22	686,036	6,325,256	0.0	0.0	0	0	526,261	00-28
		Temporary Jetty	Guide(Pile)Istallation_Driving_Below10m_H300	nos	32	398,415	12,749,294	0.0	0.0	0	0	1,060,741	00-208
		Temporary Jetty	Guide(Frame)Install / Remove	nos	39	212,361	8,282,087	0.0	0.0	0	0	689,069	00-30
		Temporary Jetty	Guide(Pile)Remove_pulling_below10m_H300	nos	32	225,769	7,224,600	0.0	0.0	0	0	601,086	00-209
		Temporary Jetty	Remove superstructure	t	18.11	245,450	4,445,104	0.0	0.0	0	0	369,832	00-149
		Temporary Jetty	Remove_Gurad rail	m	71.2	966	68,774	0.0	0.0	0	0	5,722	00-151
		Temporary Jetty	H400_L=27.5m_Pile remove_Pulling_20m	nos	39	356,477	13,902,602	0.0	0.0	0	0	1,156,696	00-210
		Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	t	9.22	477,209	4,399,864	0.0	0.0	0	0	366,068	00-153
		Inclined Jetty	Material	LS	1	0	0	0.0	0.0	4,376,875	4,376,875	4,376,875	00-202
	Subtotal					-	-	109,621,878	-	0	-	4,376,875	13,497,410	
	Reclamation of construction & st	Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	42218.915	16,802	709,343,211	0.0	0.0	0	0	59,017,355	01-179
	PKG2	Shaping slope of embankment	By machinery for Sand soil	m2	156	2,479	386,729	0.0	0.0	0	0	32,175	00-19
		Sodding	on slope	m2	156	1,169	182,334	0.0	0.0	0	0	15,170	00-33
		Sheet pile driving	Nmax<50,Type III,shorter than 12m	nos	485	20,837	10,105,833	9.2	4,471.7	0	0	1,346,599	00-91
		Sheet pile pulling	Nmax<50,shorter than 12m	nos	485	11,788	5,717,253	5.4	2,594.8	0	0	769,167	00-92
		Steel sheet pile	Type Ⅲ	ton	349.2	927,504	323,884,397	0.0	0.0	0	0	26,947,181	Mat-163
		Scrap	70%		-0.7	323,884,397	(226,719,078)	0.0	0.0	0	0	(18,863,027)	
		Sheet pile driving	Nmax<50,Type II,shorter than 9m		618	15,902	9,827,282	7.0	4,350.7	0	0	1,309,739	00-183
		Sheet pile pulling	Nmax<50,shorter than 9m		618	10,162	6,280,233	4.6	2,849.0	0	0	844,763	00-184
		Steel sheet pile	Type Ⅱ		237.312	905,424	214,867,933	0.0	0.0	0	0	17,877,012	Mat-164
		Scrap	70%		-0.7	214,867,933	(150,407,553)	0.0	0.0	0	0	(12,513,908)	
		Cement stabilization		m3	10557.5	4,574	48,284,726	0.0	0.0	0	0	4,017,289	00-15
		Cement material	Flexible container bag	t	633.45	84,600	53,589,870	0.0	0.0	0	0	4,458,677	Mat-166
		Base course leveling(Only compaction without material)	Subbase t=200mm	m2	3678	980	3,603,815	0.0	0.0	0	0	299,837	00-187
		TypeA	Concrete_t:10cm_Class E	m3	546	103,988	56,777,443	0.0	0.0	0	0	4,723,883	02-225
		TypeB	Asphalt_t:5cm	m2	187	10,589	1,980,134	0.0	0.0	0	0	164,747	00-189
		TypeC	Crushed stone_t:15cm	m2	1381	3,099	4,279,691	0.0	0.0	0	0	356,070	00-190
	Subtotal					-	-	1,071,984,253	-	14,266	-	0	90,802,729	
2. Foundation				LS	1	-	8,435,619,592	-	7,839,113	-	151,943,174	1,740,468,779	
	Foundation_cast in bored pile_RCD	Pile Cast in Site_A2	RCD pileφ1500_L=31.5m	nos	18	13,522,631	243,407,361	965.3	17,375.2	234,427	4,219,686	26,436,489	00-273
	PKG2	Pile Cast in Site_P23	RCD pileφ2000_L=32.5m	nos	12	22,256,658	267,079,897	1,138.8	13,666.1	951,158	11,413,896	35,180,713	00-274
		Pile Cast in Site_P24	RCD pileφ2000_L=47.0m	nos	12	28,702,268	344,427,220	1,390.6	16,687.2	1,111,101	13,333,212	43,877,045	00-275
		Pile Cast in Site_P25	RCD pileφ2000_L=38.0m	nos	8	23,359,141	186,873,129	1,138.8	9,110.7	688,377	5,507,016	22,085,373	00-276
	Subtotal					-	-	1,041,787,607	-	56,839	-	34,473,810	127,579,620	
	Foundation_SPSP(P21_22)	Guide_PKG2	Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty	nos	44	203,686	8,962,177	55.1	2,424.4	65,902	2,899,670	3,919,547	00-278
	Construction Method (from Jetty)	Guide_PKG2	Guide(Frame)Falswork_Install_from Jetty	t	224	320,266	71,739,640	0.0	0.0	19,969	4,473,011	10,441,749	00-279
		Steel Pipe Sheet Pile Driving_PKG2	PKG2_from Jetty_P21_22	LS	1	443,103,485	443,103,485	209,909.5	209,909.5	0	0	60,609,075	00-280
		Material cost_PKG2_from Jetty_P21_22	Steel Pipe Sheet Pile	LS	1	0	0	1,395,608.8	1,395,608.8	0	0	157,857,312	00-281
		Excavation inside of the pipe pile		m3	610	91,385	55,744,844	0.0	0.0	0	0	4,637,971	00-61
		Concrete Filling to Steel Pipe		m3	492.9	116,062	57,206,777	0.0	0.0	0	0	4,759,603	00-62
		Cleaning of Inside joint pipe		m	6890	7,453	51,351,721	1.4	9,783.8	0	0	5,379,108	00-63
		Mortar filling of Inside joint pipe		m	5295.6	3,457	18,308,902	0.0	0.0	103	545,500	2,068,800	00-64
		Sealing of Inside joint pipe	P-P_type	m	1310.4	1,854	2,430,045	0.0	0.0	621	813,405	1,015,584	00-65
		Excavation inside of the well		m3	1557.8	22,464	34,994,154	6.5	10,125.7	0	0	4,056,831	00-66
		Spread sand		m3	85.6	53,032	4,539,504	10.0	855.1	0	0	474,412	00-67
		Bottom slab concrete		m3	342.5	138,022	47,272,429	0.0	0.0	0	0	3,933,066	00-68
		Falswork Install / Remove	Install65%_Remove35%	t	52	771,851	40,136,240	0.0	0.0	20,125	1,046,510	4,385,845	00-69
		Concrete filling to space between steel pipe well and wale		m3	70	671,092	46,976,433	0.0	0.0	0	0	3,908,439	00-70
		Welding of the dowel	Stud welding_1,000mm 1 row 4nos	nos	1792	7,286	13,055,670	0.0	0.0	2,994	5,365,212	6,451,443	00-71
		Welding of the dowel	Stud welding_700mm 1 row 4nos	nos	4256	7,286	31,007,216	0.0	0.0	2,819	11,998,302	14,578,102	00-72
		Steel pipe sheet pile Cut&Removal		nos	64	342,320	21,908,456	15.0	959.4	0	0	1,931,296	00-73
	Subtotal					-	-	948,737,693	-	1,629,667	-	27,141,611	290,408,183	
	Foundation_SPSP(P14_15_16_17_18_19_20)	Guide_PKG2_on barge	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	nos	154	622,545	95,871,855	55.1	8,485.4	70,373	10,837,411	19,773,733	00-282
	Construction Method (on barge)	Guide_PKG2_on barge	Guide(Frame)Falswork_Install	t	106.204	1,279,114	135,847,048	0.0	0.0	19,969	2,120,766	13,423,240	00-283
		Steel Pipe Sheet Pile Driving_PKG2	PKG2_on barge	LS	1	4,523,749,943	4,523,749,943	734,683.3	734,683.3	0	0	459,476,025	00-284
		Material cost_PKG2_on barge	Steel Pipe Sheet Pile	LS	1	0	0	5,337,577.5	5,337,577.5	0	0	603,733,391	00-285
		Excavation inside of the pipe pile		m3	2298.7	91,385	210,066,677	0.0	0.0	0	0	17,477,547	00-61
		Concrete Filling to Steel Pipe		m3	1961.13	116,062	227,611,944	0.0	0.0	0	0	18,937,313	00-62
		Cleaning of Inside joint pipe		m	13035.9	7,453	97,157,606	1.4	18,511.0	0	0	10,177,289	00-63
		Mortar filling of Inside joint pipe		m	11976.8	3,457	41,408,349	0.0	0.0	103	1,233,730	4,678,904	00-64
		Sealing of Inside joint pipe	P-P_type	m	2970	1,854	5,507,657	0.0	0.0	621	1,843,568	2,301,805	00-65
		Excavation inside of the well		m3	7000.35	22,464	157,254,672	6.5	45,502.3	0	0	18,230,351	00-66
		Spread sand		m3	407.42	53,032	21,606,130	10.0	4,070.1	0	0	2,258,001	00-67
		Bottom slab concrete		m3	1755.7	138,022	242,324,681	0.0	0.0	0	0	20,161,413	00-68
		Falswork Install / Remove	Install65%_Remove35%	t	353.4	771,851	272,772,062	0.0	0.0	20,125	7,112,246	29,806,881	00-69
		Concrete filling to space between steel pipe well and wale		m3	234.2	671,092	157,169,723	0.0	0.0	0	0	13,076,520	00-70
		Welding of the dowel	Stud welding_1,000mm 1 row 4nos	nos	6932	7,286	50,503,294	0.0	0.0	2,994	20,754,269	24,956,143	00-71
		Welding of the dowel	Stud welding_700mm 1 row 4nos	nos	16468	7,286	119,978,108	0.0	0.0	2,819	46,425,762	56,407,940	00-72
		Steel pipe sheet pile Cut&Removal		nos	252	342,320	86,264,544	15.0	3,777.5	0	0	7,604,480	00-73
	Subtotal					-	-	6,445,094,293	-	6,152,607	-	90,327,753	1,322,480,976	
3. Substructure				LS	1	-	4,195,914,537	-	14,402	-	176,863,549	527,592,558	
	Abutment_2	Excavation	Leveling of bottom	m3	718.2	2,098	1,506,518	0.0	0.0	0	0	125,342	00-87
	Pile cap	Transportation of excavated soil		m3	897.75	2,970	2,665,869	0.0	0.0	0	0	221,800	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	203.3	20,940	4,257,149	0.0	0.0	0	0	354,194	00-76
		Leveling	by Machine	m2	223.6	365	81,502	0.0	0.0	0	0	6,780	00-75
		Crush stone base work	Crush stone,t=20cm	m2	223.6	2,604	582,234	0.0	0.0	0	0	48,441	01-33
		Concrete work(1)	18N/mm2	m3	22.4	95,194	2,132,356	0.0	0.0	0	0	177,411	00-52
		Form work	for level concrete	m2	6.3	448	2,823	0.0	0.0	0	0	234	01-24
		Concrete work for Pier(2)_On land	Class D	m3	413	91,335	37,721,165	0.0	0.0	0	0	3,138,400	00-78
		Form work	for ordinal concrete_with&without rebar	m2	118.6	8,785	1,041,867	0.0	0.0	0	0	86,683	01-22
		Rebar work_SD345	Arranging D13	ton	0.165	126,764	20,916	0.0	0.0	78,422	12,940	14,679	00-79
		Rebar work_SD345	Arranging D16-D25	ton	8.762	114,348	1,001,913	0.0	0.0	81,271	712,097	795,455	00-80
		Rebar work_SD345	Arranging D29-D32	ton	11.994	80,841	969,602	0.0	0.0	83,080	996,462	1,077,132	00-81
		Rebar work_SD345	Assembling D13	ton	0.165	154,137	25,433	0.0	0.0	0	0	2,115	00-82
		Rebar work_SD345	Assembling D16-D25	nos	8.762	128,135	1,122,715	0.0	0.0	0	0	93,409	00-83
		Rebar work_SD345	Assembling D29-D32	ton	11.994	78,633	943,122	0.0	0.0	0	0	78,467	00-84
		Sheet pile driving	Nmax<50,Type III,shorter than 12m	nos	178	20,837	3,708,945	9.2	1,641.2	0	0	494,215	00-91
		Sheet pile pulling	Nmax<50,shorter than 12m	nos	178	11,788	2,098,291	5.4	952.3	0	0	282,292	00-92
		Steel sheet pile	TypeⅡ	ton	133.5	927,504	123,821,784	0.0	0.0	0	0	10,301,972	Mat-163
		Scrap	70%	0	-0.7	123,821,784	(86,675,249)	0.0	0.0	0	0	(7,211,380)	0.00
	Subtotal					-	-	97,028,954	-	2,593	-	1,721,498	10,087,641	
	Abutment_2	Concrete work for Pier(2)_On land	Class D	m3	179	91,335	16,348,883	0.0	0.0	0	0	1,360,227	00-78
	Wall, Parapet, Wing wall	Form work	for ordinal concrete_with&without rebar	m2	332.5	8,785	2,920,916	0.0	0.0	0	0	243,020	01-22
		Rebar work_SD345	Arranging D13	ton	0.198	126,764	25,099	0.0	0.0	78,422	15,528	17,615	00-79
		Rebar work_SD345	Arranging D16-D25	ton	6.283	114,348	718,446	0.0	0.0	81,271	510,626	570,400	00-80
		Rebar work_SD345	Arranging D29-D32	ton	15.584	80,841	1,259,819	0.0	0.0	83,080	1,294,719	1,399,535	00-81
		Rebar work_SD345	Assembling D13	ton	0.198	154,137	30,519	0.0	0.0	0	0	2,539	00-82
		Rebar work_SD345	Assembling D16-D25	nos	6.283	128,135	805,070	0.0	0.0	0	0	66,981	00-83
		Rebar work_SD345	Assembling D29-D32	ton	15.584	78,633	1,225,413	0.0	0.0	0	0	101,954	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	19	137,517	2,612,831	0.0	0.0	0	0	217,387	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	328.2	17,532	5,753,940	0.0	0.0	0	0	478,727	00-86
		Supporting	Wedge type	m3	0	17,796	0	0.0	0.0	0	0	0	02-237
		Non-shrink Mortar		m3	0.7	2,565,045	1,795,532	0.0	0.0	0	0	149,388	02-229
	Subtotal					-	-	33,496,468	-	0	-	1,820,872	4,607,773	

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
	Pier_on Land	Excavation	Leveling of bottom	m3	2742.7	2,098	5,753,170	0.0	0.0	0	0	478,663	00-87
	Pile cap,Concrete 24N/mm2_Pier23,24,25	Transportation of excavated soil		m3	3428.375	2,970	10,180,560	0.0	0.0	0	0	847,022	00-77
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	1263.8	20,940	26,464,263	0.0	0.0	0	0	2,201,826	00-76
		Leveling	by Machine	m2	608.4	365	221,762	0.0	0.0	0	0	18,450	00-75
		Crush stone base work	Crush stone,t=20cm	m2	608.4	2,604	1,584,219	0.0	0.0	0	0	131,807	01-33
		Concrete work(1)	18N/mm2	m3	60.9	95,194	5,797,342	0.0	0.0	0	0	482,338	00-52
		Form work	for level concrete	m2	17.7	448	7,932	0.0	0.0	0	0	659	01-24
		Concrete work for Pier(2)_On land	Class D	m3	1180.5	91,335	107,820,424	0.0	0.0	0	0	8,970,659	00-78
		Form work	for ordinal concrete_with&without rebar	m2	347.4	8,785	3,051,808	0.0	0.0	0	0	253,910	01-22
		Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	19.735	114,348	2,256,649	0.0	0.0	81,271	1,603,883	1,791,636	00-80
		Rebar work_SD345	Arranging D29-D32	ton	81.658	80,841	6,601,279	0.0	0.0	83,080	6,784,147	7,333,373	00-81
		Rebar work_SD345	Arranging D35	ton	28.005	126,764	3,550,012	0.0	0.0	80,321	2,249,390	2,544,750	00-225
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	nos	19.735	128,135	2,528,736	0.0	0.0	0	0	210,390	00-83
		Rebar work_SD345	Assembling D29-D32	ton	81.658	78,633	6,420,996	0.0	0.0	0	0	534,226	00-84
		Rebar work_SD345	Assembling D35	ton	28.005	154,137	4,316,605	0.0	0.0	0	0	359,141	00-229
		Sheet pile driving	Nmax<50,Type III,shorter than 12m	nos	511	20,837	10,647,589	9.2	4,711.4	0	0	1,418,788	00-91
		Sheet pile pulling	Nmax<50,shorter than 12m	nos	511	11,788	6,023,745	5.4	2,733.9	0	0	810,401	00-92
		Sheet pile driving	Nmax<50,Type V,shorter than 25m	nos	148	46,482	6,879,339	20.6	3,044.4	0	0	916,708	00-185
		Sheet pile pulling	Nmax<50,shorter than 25m	nos	148	19,647	2,907,743	8.9	1,318.7	0	0	391,080	00-186
		Falsework(Guide,Frame,Wale,Strut)	H-beam_Install / Remove	ton	124.662	124,838	15,562,551	0.0	0.0	0	0	1,294,804	00-93
		Steel sheet pile	PKG2_on Land	LS	1	689,159,851	689,159,851	0.0	0.0	0	0	57,338,099	00-277
		H beam	H400x400x13x21	ton	124.662	0	0	0.0	0.0	69,300	8,639,077	8,639,076	Mat-169
		Scrap	70%	0	-0.7	689,159,851	(482,411,895)	0.0	0.0	8,639,077	(6,047,354)	(46,184,023)	
	Subtotal				-	-	435,324,678	-	11,808	-	13,229,142	50,783,783	
	Pier_on Land	Concrete work for Pier(2)_On land	Class D	m3	303.5	91,335	27,720,033	0.0	0.0	0	0	2,306,306	00-78
	Column_24N/mm2_P24-25	Form work	for ordinal concrete_with&without rebar	m2	276.1	8,785	2,425,458	0.0	0.0	0	0	201,798	01-22
		Rebar work_SD345	Arranging D13	ton	0.872	126,764	110,538	0.0	0.0	78,422	68,384	77,580	00-79
		Rebar work_SD345	Arranging D16-D25	ton	23.539	114,348	2,691,627	0.0	0.0	81,271	1,913,038	2,136,981	00-80
		Rebar work_SD345	Arranging D29-D32	ton	0	80,841	0	0.0	0.0	83,080	0	0	00-81
		Rebar work_SD345	Assembling D13	ton	0.872	154,137	134,407	0.0	0.0	0	0	11,182	00-82
		Rebar work_SD345	Assembling D16-D25	nos	23.539	128,135	3,016,160	0.0	0.0	0	0	250,944	00-83
		Rebar work_SD345	Assembling D29-D32	ton	0	78,633	0	0.0	0.0	0	0	0	00-84
		Miscellaneous work	Form work_Cylindrical type φ170	nos	40	137,517	5,500,697	0.0	0.0	0	0	457,657	00-85
		Falsework	Scaffloding (Handrail precede type)	m2	319.5	17,532	5,601,413	0.0	0.0	0	0	466,037	00-86
		Supporting	Wedge type	m3	0	17,796	0	0.0	0.0	0	0	0	02-237
		Non-shrink Mortar		m3	2.6	2,565,045	6,669,117	0.0	0.0	0	0	554,870	02-229
	Subtotal				-	-	53,869,451	-	0	-	1,981,422	6,463,355	
	Pier_on Land	Concrete work for Pier(2)_On land	Class C I	m3	422.8	97,031	41,024,673	0.0	0.0	0	0	3,413,252	00-56
	Column_30N/mm2_P23	Form work	for ordinal concrete_with&without rebar	m2	377.1	8,785	3,312,714	0.0	0.0	0	0	275,617	01-22
		Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	32.139	114,348	3,675,017	0.0	0.0	81,271	2,611,969	2,917,730	00-80
		Rebar work_SD345	Arranging D29-D32	ton	7.272	80,841	587,873	0.0	0.0	83,080	604,158	653,068	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	nos	32.139	128,135	4,118,117	0.0	0.0	0	0	342,627	00-83
		Rebar work_SD345	Assembling D29-D32	ton	7.272	78,633	571,818	0.0	0.0	0	0	47,575	00-84
		Rebar work_SD390	Arranging D16-D25	ton	0	114,348	0	0.0	0.0	79,372	0	0	00-212
		Rebar work_SD390	Arranging D29-D32	ton	28.647	80,841	2,315,840	0.0	0.0	80,321	2,300,956	2,493,633	00-213
		Rebar work_SD390	Assembling D16-D25	ton	0	128,135	0	0.0	0.0	0	0	0	00-215
		Rebar work_SD390	Assembling D29-D32	ton	28.647	78,633	2,252,593	0.0	0.0	0	0	187,415	00-216
		Miscellaneous work	Form work_Cylindrical type φ170	nos	20	137,517	2,750,348	0.0	0.0	0	0	228,828	00-85
		Non-shrink Mortar		m3	1.3	2,565,045	3,334,559	0.0	0.0	0	0	277,435	02-229
		Falsework	Scaffloding (Handrail precede type)	m2	496.8	17,532	8,709,803	0.0	0.0	0	0	724,655	00-86
		Supporting	Wedge type	m3	157.2	17,796	2,797,545	0.0	0.0	0	0	232,755	02-237
	Subtotal				-	-	75,450,900	-	0	-	5,517,082	11,794,590	
	Pier_on River_PKG2	Pile cap_on River	Class D	m3	4170.9	105,754	441,089,651	0.0	0.0	0	0	36,698,658	00-50
	Pile cap	Rebar work_SD345	Arranging D13	ton	2.391	126,764	303,092	0.0	0.0	78,422	187,507	212,724	00-79
		Rebar work_SD345	Arranging D16-D25	ton	60.024	114,348	6,863,599	0.0	0.0	81,271	4,878,211	5,449,261	00-80
		Rebar work_SD345	Arranging D29-D32	ton	148.921	80,841	12,038,859	0.0	0.0	83,080	12,372,357	13,373,989	00-81
		Rebar work_SD345	Assembling D13	ton	2.391	154,137	368,541	0.0	0.0	0	0	30,662	00-82
		Rebar work_SD345	Assembling D16-D25	nos	60.024	128,135	7,691,150	0.0	0.0	0	0	639,903	00-83
		Rebar work_SD345	Assembling D29-D32	ton	148.921	78,633	11,710,072	0.0	0.0	0	0	974,278	00-84
		Rebar work_SD345	Arranging D35	ton	14.86	126,764	1,883,706	0.0	0.0	80,321	1,193,570	1,350,294	00-225
		Rebar work_SD345	Arranging D51	ton	192.876	126,764	24,449,641	0.0	0.0	83,080	16,024,138	18,058,348	00-227
		Rebar work_SD345	Assembling D35	ton	14.86	154,137	2,290,475	0.0	0.0	0	0	190,567	00-229
		Rebar work_SD345	Assembling D51	ton	192.876	154,137	29,729,315	0.0	0.0	0	0	2,473,478	00-232
		Mechanical joint	D38, deformed bar	nos	0	0	0	0.0	0.0	3,006	0	0	Mat-293
		Mechanical joint	D51, deformed bar	nos	530	0	0	0.0	0.0	5,832	3,090,960	3,090,960	Mat-295
		Crawler crane	50～55t hang	day	189	297,147	56,160,821	0.0	0.0		0	4,672,580	OPE-26
		Barge	800t	day	189	1,388,221	262,373,798	0.0	0.0	0	0	21,829,500	Mac-d(20)
	Subtotal				-	-	856,952,718	-	0	-	37,746,742	109,045,202	
	Pier_on River_PKG2	Concrete work for Pier(2)_On river	Class C I	m3	7838.3	111,351	872,802,073	0.0	0.0	0	0	72,617,132	00-89
	Column_30N/mm2	Rebar work_SD345	Arranging D13	ton	0	126,764	0	0.0	0.0	78,422	0	0	00-79
		Rebar work_SD345	Arranging D16-D25	ton	508.623	114,348	58,159,804	0.0	0.0	81,271	41,336,300	46,175,195	00-80
		Rebar work_SD345	Arranging D29-D32	ton	70.872	80,841	5,729,333	0.0	0.0	83,080	5,888,046	6,364,726	00-81
		Rebar work_SD345	Assembling D13	ton	0	154,137	0	0.0	0.0	0	0	0	00-82
		Rebar work_SD345	Assembling D16-D25	nos	508.623	128,135	65,172,194	0.0	0.0	0	0	5,422,326	00-83
		Rebar work_SD345	Assembling D29-D32	ton	70.872	78,633	5,572,862	0.0	0.0	0	0	463,662	00-84
		Rebar work_SD390	Arranging D38	ton	541.809	126,764	68,681,616	0.0	0.0	84,119	45,576,431	51,290,741	00-218
		Rebar work_SD390	Assembling D38	ton	541.809	154,137	83,512,776	0.0	0.0	0	0	6,948,262	00-222
		Rebar work_SD390	Arranging D29-D32	ton	65.652	80,841	5,307,345	0.0	0.0	80,321	5,273,234	5,714,805	00-213
		Rebar work_SD390	Assembling D29-D32	ton	65.652	78,633	5,162,399	0.0	0.0	0	0	429,511	00-216
		Mechanical joint	D38, deformed bar	nos	4264	0	0	0.0	0.0	3,006	12,817,584	12,817,584	Mat-293
		Mechanical joint	D51, deformed bar	nos	0	0	0	0.0	0.0	5,832	0	0	Mat-295
		Crawler crane	50～55t hang	day	315	297,147	93,601,368	0.0	0.0		0	7,787,633	OPE-26
		Barge	800t	day	315	1,388,221	437,289,663	0.0	0.0	0	0	36,382,500	Mac-d(20)
		Non-shrink Mortar		m3	14.668	2,565,045	37,624,080	0.0	0.0	0	0	3,130,323	02-229
		Form work	Ordinal type	m2	3844.3	13,806	53,076,136	0.0	0.0	0	0	4,415,934	00-156
		Form work	Plywood curved panel	m2	1597.7	17,762	28,377,708	0.0	0.0	0	0	2,361,025	00-157
		Scaffolding	Hand rail precede type	m2	7729.7	9,747	75,338,217	0.0	0.0	289	2,231,023	8,499,162	00-158
		Supporting	Wedge type	m3	1036.1	17,796	18,438,529	0.0	0.0	0	0	1,534,085	02-237
		Bracket support_PKG2	Pierhead_coping	set	9	80,112,741	721,014,672	0.0	0.0	0	0	59,988,420	00-160
	Subtotal				-	-	2,634,860,776	-	0	-	113,122,618	332,343,026	
	Approach slab	Concrete work	24N/mm2	m3	31.4	99,456	3,122,928	0.0	0.0	0	0	259,827	00-51
	A2	Rebar work_SD345	Arranging D13	ton	0.326	126,764	41,325	0.0	0.0	78,422	25,566	29,003	00-79
		Rebar work_SD345	Arranging D16-D25	ton	2.64	114,348	301,878	0.0	0.0	81,271	214,555	239,671	00-80
		Rebar work_SD345	Arranging D29-D32	ton	2.958	80,841	239,126	0.0	0.0	83,080	245,751	265,645	00-81
		Rebar work_SD345	Assembling D13	ton	0.326	154,137	50,249	0.0	0.0	0	0	4,180	00-82
		Rebar work_SD345	Assembling D16-D25	nos	2.64	128,135	338,275	0.0	0.0	0	0	28,144	00-83
		Rebar work_SD345	Assembling D29-D32	ton	2.958	78,633	232,596	0.0	0.0	0	0	19,351	00-84
		Form work	for ordinal concrete_with&without rebar	m2	7.7	8,785	67,642	0.0	0.0	0	0	5,627	01-22
	Subtotal				-	-	4,394,018	-	0	-	485,872	851,448	
	Approach slab	Concrete work	24N/mm2	m3	18.9	99,456	1,879,724	0.0	0.0	0	0	156,393	00-51
	AF1	Rebar work_SD345	Arranging D13	ton	0.713	126,764	90,382	0.0	0.0	78,422	55,915	63,434	00-79
		Rebar work_SD345	Arranging D16-D25	ton	0.589	114,348	67,351	0.0	0.0	81,271	47,869	53,472	00-80
		Rebar work_SD345	Arranging D29-D32	ton	1.413	80,841	114,228	0.0	0.0	83,080	117,392	126,895	00-81
		Rebar work_SD345	Assembling D13	ton	0.713	154,137	109,900	0.0	0.0	0	0	9,143	00-82
		Rebar work_SD345	Assembling D16-D25	nos	0.589	128,135	75,471	0.0	0.0	0	0	6,279	00-83
		Rebar work_SD345	Assembling D29-D32	ton	1.413	78,633	111,108	0.0	0.0	0	0	9,244	00-84
		Form work	for ordinal concrete_with&without rebar	m2	7.3	8,785	64,128	0.0	0.0	0	0	5,335	01-22
	Subtotal				-	-	2,512,292	-	0	-	221,176	430,195	
	Bridge Name Plate Installation Works	PKG2		nos	1	1,902,479	1,902,479	0.0	0.0	0	0	158,286	00-119
	Subtotal				-	-	1,902,479	-	0	-	0	158,286	
	Inspection Ladder	PKG2		LS	1	121,803	121,803	0.0	0.0	1,017,125	1,017,125	1,027,259	PKG2-35
	Subtotal				-	-	121,803	-	0	-	1,017,125	1,027,259	
4. Superstructure		Steel box girder bridge		LS	1	-	3,595,221,052	-	1,513,125	-	3,996,079,298	4,466,351,282	
	Steel box girder bridge	Fabrication of steel girder		L.S.	1	0	0	0.0	0.0	3,591,563,826	3,591,563,826	3,591,563,825	Quatation
		Erection of girder	PKG2	L.S.	1	2,868,102,557	2,868,102,557	129,263.7	129,263.7	170,378,149	170,378,149	423,625,296	00-287
		Dead-bolting including temporary	Steel box girder_PKG2	nos	587970	286	168,053,585	0.0	0.0	47	27,869,778	41,851,836	01-281
		Painting in site	Steel box girder_PKG2	LS	1	205,994,940	205,994,940	0.0	0.0	50,493,000	50,493,000	67,631,779	00-288
		Bearing setting	Steel box girder_PKG2	LS	1	30,538,704	30,538,704	1,383,861.6	1,383,861.6	0	0	159,069,405	00-289
		Expaansion Joint setting	Steel box girder_PKG2	LS	1	2,977,201	2,977,201	0.0	0.0	36,515,994	36,515,994	36,763,697	00-290
		Wheel Guard & Median Strip	Cast in site for Steel box girder	LS	1	99,849,687	99,849,687	0.0	0.0	4,668,823	4,668,823	12,976,316	00-291
		Installation of barrier, railing		m	3120	4,312	13,452,691	0.0	0.0	0	0	1,119,263	01-134
		Barrier fabrication	Steel box girder(PKG2)	LS	1	0	0	0.0	0.0	70,658,796	70,658,796	70,658,796	01-200
		Drainage work	For Any	nos	152	13,704	2,083,037	0.0	0.0	53,767	8,172,584	8,345,892	00-106
		Transportation in site	Special trailer 60 t	month	4.5	13,594,952	61,177,284	0.0	0.0	0	0	5,089,949	01-213
		Temporary placing	by 70 t CC	block	280	38,912	10,895,265	0.0	0.0	0	0	906,486	01-105
		Transportation in site(Segment&C	by Carriage (carriage length: below 200m)	nos	140	294,178	41,184,923	0.0	0.0	0	0	3,426,585	01-107
		Loading on barge	by 200 t CC and 200 t TC	Time	140	319,983	44,797,550	0.0	0.0	0	0	3,727,156	01-108
		Transportation on river(con. Block	by 800 t barge	month	8	1,388,221	11,105,769	0.0	0.0	0	0	924,000	0.00
		Facilities and Concrete Base for R	(Package-2)	LS	1	35,007,859	35,007,859	0.0	0.0	24,743,400	24,743,400	27,656,053	00-292
		Accessory&Miscellaneous work	Steel box Bridge(PKG2)	LS	1	0	0	0.0	0.0	11,014,948	11,014,948	11,014,948	00-163
	Subtotal				-	-	3,595,221,052	-	1,513,125	-	3,996,079,298	4,466,351,282	
5. Superstructure		PC box girder_SBS_PKG2		LS	1	-	2,745,466,075	-	2,347,159.6	-	390,943,627	884,853,625	
	PC box girder_SBS_PKG2	Fabrication of precast segment	Shortline matching method_PKG2	LS	1	1,568,984,069	1,568,984,069	473,525.2	473,525.2	67,583,590	67,583,590	251,683,503	00-293
		Erection	Span by span method_PKG2	LS	1	597,518,033	597,518,033	0.0	0.0	130,978,722	130,978,722	180,692,222	00-294
		Prestressing	PKG2	LS	1	324,883,911	324,883,911	0.0	0.0	108,791,188	108,791,188	135,821,529	00-295
		Bearing setting	PC Box(PKG2)	LS	1	22,179,858	22,179,858	1,873,634.4	1,873,634.4	0	0	213,772,151	00-296
		Expansion joint setting	PC Box_PKG2	LS	1	2,343,822	2,343,822	0.0	0.0	25,065,000	25,065,000	25,260,006	00-297
		Wheel Guard & Median Strip	Cast in site_PC box_PKG2	LS	1	54,768,023	54,768,023	0.0	0.0	1,835,075	1,835,075	6,391,774	00-300
		Installation of barrier, railing		m	1200	4,312	5,174,112	0.0	0.0	0	0	430,486	01-134
		Barrier Fabrication	PC box_PKG2	LS	1	1,794,291	1,794,291	0.0	0.0	28,547,881	28,547,881	28,697,166	00-301
		Drainage work	PC box_PKG2	LS	1	10,760,234	10,760,234	0.0	0.0	1,613,011	1,613,011	2,508,262	00-302
		Manhole cover	PC box	nos	4	224,710	898,840	0.0	0.0	16,843	67,371	142,154	00-177
		Pier Head Cast in Place_temporary expense		pier	7	14,779,967	103,459,771	0.0	0.0	373,627	2,615,389	11,223,241	00-182
		Pier head temporary bearing	200 t hydraulic jack*16 nos/pier*8 month*30 days	nos-day	11520	0	0	0.0	0.0	2,070	23,846,400	23,846,400	CEDC_18-7_200-001
		Concrete cast in place		0	0	0	0	0.0	0.0	0	0	0	0.00
		Form fabrication, installation, and removal		m2	520	26,799	13,935,620	0.0	0.0	0	0	1,159,443	01-257
		Concrete (Cast-in-place)	50 Mpa	m3	340	114,016	38,765,491	0.0	0.0	0	0	3,225,288	01-259
	Subtotal				-	-	2,745,466,075	-	2,347,160	-	390,943,627	884,853,625	

	Category	Item	Specification	Unit	Quantity	Local(MMK)		Main(USD)		Yen(JPY)		Total	Item Conditions
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal	Yen conv.	
6. Approach Road				LS	1	-	5,184,170,414	-	0	-	154,347,367	585,670,327	
	Approach road	Cutting&Dozing	by bulldozer for loose soil(sand)	m3	25234	1,347	33,987,675	0.0	0.0	0	0	2,827,774	00-18
	PKG2	Excavation&Loading	Loose sand_Backhoe･Full bucket0.6m3	m3	31542.5	1,154	36,415,501	0.0	0.0	0	0	3,029,769	00-4
		Backfilling	Class_C,1m＜W1＜4m_Borrow material	m3	5171	20,940	108,281,929	0.0	0.0	0	0	9,009,056	00-76
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	38598	16,802	648,506,227	0.0	0.0	0	0	53,955,718	01-179
		Shaping slope of embankment	By machinery for Sand soil	m2	2527	2,584	6,528,555	0.0	0.0	0	0	543,175	00-37
		Sodding	on slope	m2	2527	1,169	2,953,583	0.0	0.0	0	0	245,738	00-33
	Subtotal				-	-	836,673,470	-	0	-	0	69,611,230	
	Soft Soil Treatment	Deep mixing method	2 axis φ1200_18-22m	set	112	32,009	3,585,012	0.0	0.0	81,904	9,173,248	9,471,521	00-328
	PKG2_Main road	Deep mixing method	2 axis φ1200_15-18m	set	486	26,674	12,963,661	0.0	0.0	68,253	33,170,958	34,249,534	00-329
		Deep mixing method	2 axis φ1200_12-15m	set	816	22,864	18,656,689	0.0	0.0	58,502	47,737,632	49,289,868	00-330
		Deep mixing method	2 axis φ1200_7-9m	set	39	16,005	624,176	0.0	0.0	40,951	1,597,089	1,649,020	00-331
		Deep mixing method	2 axis φ1200_6-7m	set	150	14,550	2,182,436	0.0	0.0	37,229	5,584,350	5,765,928	00-332
		Deep mixing method	2 axis φ1200_5-6m	set	117	13,337	1,560,441	0.0	0.0	34,126	3,992,742	4,122,570	00-333
		Soil Cement Colmuns	(Preliminary Test Colums; Non-working Pile) including Field Test	LS	1	0	0	0.0	0.0	11,000,000	11,000,000	11,000,000	Quatation
		Cement material	Ordinal portland cement	t	19161.4	84,600	1,621,054,440	0.0	0.0	0	0	134,871,729	Mat-53
		Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	m3	48516	16,802	815,144,000	0.0	0.0	0	0	67,819,980	01-179
		Sand mat	Sand mat for preloading	m3	61308	18,451	1,131,213,527	0.0	0.0	0	0	94,116,965	01-180
		Cement stabilization		m3	11585	4,574	52,983,998	0.0	0.0	0	0	4,408,268	00-15
		Cement material		t	2626.69	84,600	222,217,974	0.0	0.0	0	0	18,488,535	Mat-166
	Subtotal				-	-	3,882,186,353	-	0	-	112,256,019	435,253,918	
	Mechanically Stabilized Earth Wal	Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	m2	1087.4	217,778	236,811,623	0.0	0.0	0	0	19,702,727	00-124
	PKG2_Main road	Reinforcement Material Installation	Reinforced Retaining Wall (Type 1)	m	9878	167	1,650,219	0.0	0.0	1,233	12,179,574	12,316,872	00-125
		Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	m3	2232.3	2,233	4,984,346	0.0	0.0	0	0	414,697	00-126
		Concret work_other material insta	Reinforced Retaining Wall (Type 1)	LS	1	88,086,442	88,086,442	0.0	0.0	4,659,007	4,659,007	11,987,798	00-303
		Base concrete of Reinforced Reta	Base concrete	LS	1	9,961,468	9,961,468	0.0	0.0	0	0	828,794	00-304
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		Installation of barrier, railing	0	m	0	4,312	0	0.0	0.0	0	0	0	01-134
		Barrier Fabrication	on Mechanically Stabilized Earth Wall	LS	0	152,113	0	0.0	0.0	2,420,179	0	0	00-180
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
		0	0	0	0	0	0	0.0	0.0	0	0	0	0.00
	Subtotal				-	-	341,494,098	-	0	-	16,838,581	45,250,888	
	Retaning Wall (L Shape Type)	Retaining Wall (Type 2)	24N/mm2	m3	241.68	88,757	21,450,898	0.0	0.0	0	0	1,784,714	02-06
	PKG2	Rebar work_SD345	Arranging D13	ton	79.08	126,764	10,024,459	0.0	0.0	78,422	6,201,612	7,035,646	00-79
		Rebar work_SD345	Assembling D13	ton	79.08	154,137	12,189,148	0.0	0.0	0	0	1,014,137	00-82
		Form work	for ordinal concrete_with&without rebar	m2	754.45	8,785	6,627,624	0.0	0.0	0	0	551,418	01-22
	Subtotal				-	-	50,292,130	-	0	-	6,201,612	10,385,915	
	Accessory_Approach road	Guard-rail installation	Metal type(GR-A)	m	634.202	3,098	1,964,916	0.0	0.0	30,000	19,026,060	19,189,541	00-129
	for Approach road_PKG2	Concrete Kerb Type A-1		lm	607.377	7,000	4,251,639	0.0	0.0	0	0	353,736	
		Concrete Kerb Type E		lm	95.347	6,000	572,082	0.0	0.0	0	0	47,597	
		Concrete Seal (t = 100 mm, with Wire Net)		m2	1241.797	40,000	49,671,880	0.0	0.0	0	0	4,132,700	
		Concrete Seal (t = 70 mm)		lm	44.961	40,000	1,798,440	0.0	0.0	0	0	149,630	
		Median Type A		lm	81.56	10,000	815,600	0.0	0.0	0	0	67,857	
		Median Type B		lm	165.277	10,000	1,652,770	0.0	0.0	0	0	137,510	
		Road Markings Solid Line (W=100mm)		lm	5989.937	1,980	11,860,075	0.0	0.0	0	0	986,758	
		Road Markings Solid Line (W=150mm)		lm	17.427	2,323	40,483	0.0	0.0	0	0	3,368	
		Road Markings Solid Line (W=300mm)		lm	14.022	5,500	77,121	0.0	0.0	0	0	6,416	
		Road Markings Solid Line (W=450mm)		lm	24.984	6,852	171,190	0.0	0.0	0	0	14,243	
		Toll Ahead Marks		Nos.	4	3,903	15,612	0.0	0.0	0	0	1,298	
		Arrow Marks		Nos.	9	3,903	35,127	0.0	0.0	0	0	2,922	
		Ligitning Foundation	Cast in site_PKG2_Approach_Main	LS	1	597,427	597,427	0.0	0.0	25,095	25,095	74,800	
	Subtotal				-	-	73,524,362	-	0	-	19,051,155	25,168,376	
7. Waterworks				LS	1	-	697,190,988	-	0	-	25,447,112	83,453,393	
	Drainage work_approach road	U-Ditch_without_cover	B/H=0.3/0.3m	m	26.207	50,923	1,334,533	0.0	0.0	0	0	111,033	00-272
	PKG2	U-Ditch_with_cover	B/H=1.5/2.5m	m	1111.563	563,775	626,671,586	0.0	0.0	8,070	8,969,869	61,108,944	00-137
		Catch Pit	B/L=0.6/0.4m,H=0.5m	nos	32	174,374	5,579,966	0.0	0.0	0	0	464,253	00-253
		Catch Pit	B/L=0.5/0.5m,H=0.7m	nos	17	94,026	1,598,448	0.0	0.0	0	0	132,990	00-252
		Catch Pit	B/L=0.435/0.6m,H=0.75m	nos	2	206,344	412,689	0.0	0.0	0	0	34,335	00-251
		Catch Pit	B/L=0.6/0.4m,H=0.5m	nos	4	176,935	707,738	0.0	0.0	0	0	58,883	00-250
		Catch Pit	B/L=0.6/0.6m,H=1.1m	nos	4	413,240	1,652,961	0.0	0.0	11,821	47,284	184,810	00-325
		Pipe culvert	φ0.3m,360° concreted_A	m	102.064	55,031	5,616,654	0.0	0.0	1,145	116,863	584,168	00-254
		Pipe culvert	φ0.3m,360° concreted_B	m	358.097	58,156	20,825,407	0.0	0.0	1,145	410,021	2,142,694	00-255
		Vertical Drain	TypeA_PKG2	LS	1	3,647,481	3,647,481	0.0	0.0	0	0	303,470	00-260
		Vertical Drain	TypeB_PKG2	LS	1	1,404,962	1,404,962	0.0	0.0	623	623	117,515	00-261
		Setting of Flap Gate	1500*2000	set	2	1,268,335	2,536,669	0.0	0.0	7,704,000	15,408,000	15,619,050	01-264
		Outlet_TypeB_Left	PKG2	LS	1	12,886,268	12,886,268	0.0	0.0	247,226	247,226	1,319,363	00-257
		Outlet_TypeB_Right	PKG2	LS	1	12,315,624	12,315,624	0.0	0.0	247,226	247,226	1,271,885	00-258
	Subtotal				-	-	697,190,988	-	0	-	25,447,112	83,453,393	
8. Pavement				LS	1	-	1,536,945,611	-	0	-	181,308,787	309,182,658	
	Pavement on bridge surface	Pavement	on Steel deck	m2	13942.8	62,136	866,350,936	0.0	0.0	11,888	165,747,545	237,827,942	
	PKG2	Pavement	on Concrete deck	m2	5391	18,541	99,952,429	0.0	0.0	2,138	11,523,263	19,839,304	
	Subtotal				-	-	966,303,365	-	0	-	177,270,807	257,667,246	
	Pavement_Approach_road_main	Pavement_Levelling	Roadbed & subgrade	m2	9282	597	5,537,456	0.0	0.0	0	0	460,716	00-5
	PKG2	Road base	Subbase courset=500mm	m2	0	10,005	0	0.0	0.0	0	0	0	00-266
		Road base	Subbase courset=350mm	m2	14702.9	6,905	101,528,671	0.0	0.0	0	0	8,447,185	00-265
		Road base	Base course t=250mm	m2	9973.94	7,814	77,931,979	0.0	0.0	0	0	6,483,940	00-262
		Pavement	Binder course t=50mm W>=3m, including prime coat	m2	10614.919	11,383	120,826,969	0.0	0.0	0	0	10,052,803	00-9
		Pavement	Surface course t=50mmW>=3.0m, including tack coat	m2	10855.919	10,909	118,426,678	0.0	0.0	0	0	9,853,099	00-8
	Subtotal				-	-	424,251,752	-	0	-	0	35,297,743	
	Pavement_Rigid_Approach_road_S	PKG1	t=250	LS	1	146,390,494	146,390,494	0.0	0.0	4,037,980	4,037,980	16,217,669	PKG2-29
	Subtotal				-	-	146,390,494	-	0	-	4,037,980	16,217,669	
9. Electrical work				LS	1	-	0	-	0	-	113,632,501	113,632,501	
	Electrical work	Lightning work	PKG2	LS	1	0	0	0.0	0.0	94,494,226	94,494,226	94,494,226	00-314
	PKG2	Power supply equipment	PKG2	LS	1	0	0	0.0	0.0	19,138,275	19,138,275	19,138,275	00-315
	Subtotal				-	-	0	-	0	-	113,632,501	113,632,501	
10. Toll Plaza				LS	1	-	0	-	0	-	251,261,754	251,261,754	
	Toll Plaza	Toll Plaza Facility	Toll Island (1.8m x 25.0m)	set	7	0	0	0.0	0.0	1,031,898	7,223,286	7,223,286	
		Toll Plaza Facility	Toll Island (2.2m x 25.0m)	set	2	0	0	0.0	0.0	21,027,927	42,055,854	42,055,854	
		Toll Plaza Facility	Steel Large Roof (12.0m x 50.8m)	set	1	0	0	0.0	0.0	61,801,781	61,801,781	61,801,781	
		Toll Plaza Facility	Steel Booth (1.2m x 3.9m)	set	9	0	0	0.0	0.0	7,881,500	70,933,500	70,933,500	
		Toll Plaza Facility	Steel Booth (1.4m x 6.0m)	set	1	0	0	0.0	0.0	7,881,500	7,881,500	7,881,500	
		Toll Plaza Facility	Steel Staircase (Height: 3.5m)	LS	1	0	0	0.0	0.0	2,819,322	2,819,322	2,819,322	
	Toll Plaza	Administrative Office_PKG2	Building/Equipment	LS	1	0	0	0.0	0.0	58,546,511	58,546,511	58,546,511	
	Subtotal				-	-	0	-	0	-	251,261,754	251,261,754	
11. General temp. work cost				式	1	-	3,311,687,052	-	2,481,730	-	311,780,297	868,021,136	
	Rate Calculation	-	GTP_PKG1	LS	1	0	0	0.0	0.0	186,347,643	186,347,643	186,347,643	GTW-1
	Material shipping cost	-	Yokohama or Vietnam-Yangon	LS	1	10,753,800	10,753,800	2,387,730.0	2,387,730.0	36,123,394	36,123,394	307,094,250	GTW-2
	Machinery shipping cost	-	Yokohama or Singapole-Yangon	LS	1	75,313,000	75,313,000	79,000.0	79,000.0	61,312,000	61,312,000	76,513,731	GTW-3
	Assembly & Disassembly	-	Machinery	LS	1	0	0	0.0	0.0	4,831,260	4,831,260	4,831,260	GTW-4
	Safety Related Cost for Navigation	-	Guard Boat, Buoy	LS	1	321,720,000	321,720,000	0.0	0.0	0	0	26,767,104	GTW-14
	Safety Related Cost for Traffic	-	Guardman/Traffic signboard	LS	1	5,536,000	5,536,000	0.0	0.0	0	0	460,595	GTW-15
	Safety Related Cost for Traffic	-	Temporary fence	LS	1	21,912,800	21,912,800	0.0	0.0	0	0	1,823,144	GTW-16
	Site administration cost	-	Electricity/Water well	LS	1	84,850,000	84,850,000	15,000.0	15,000.0	0	0	8,756,170	GTW-17
	Quality control test	-	0.00	LS	1	146,216,500	146,216,500	0.0	0.0	23,166,000	23,166,000	35,331,212	GTW-18
	Site expense	-	Installation/Remove, Maintenance	LS	1	10,610,000	10,610,000	0.0	0.0	0	0	882,752	GTW-19
	Equipment for General Use	-	PKG2	LS	1	2,632,344,952	2,632,344,952	0.0	0.0	0	0	219,011,099	GTW-20
	Others	-	Project information board	LS	1	2,430,000	2,430,000	0.0	0.0	0	0	202,176	GTW-21
12. Site expenses(Site management cost)				LS	1	-	1,011,350,000	-	292,400	-	996,121,045	1,113,338,726	
	Airfare for Engineer	-		LS	1	0	0	0.0	0.0	17,321,900	17,321,900	17,321,900	SMC-1
	Airfare for Experts	-		LS	1	0	0	0.0	0.0	6,376,760	6,376,760	6,376,760	SMC-2
	Overseas Remuneration	-		LS	1	0	0	0.0	0.0	277,444,000	277,444,000	277,444,000	SMC-3
	Overseas Remuneration	-		LS	1	0	0	0.0	0.0	106,353,000	106,353,000	106,353,000	SMC-4
	Allowance	-		LS	1	0	0	0.0	0.0	38,357,280	38,357,280	38,357,280	SMC-5
	Allowance	-		LS	1	0	0	0.0	0.0	166,466,400	166,466,400	166,466,400	SMC-6
	Accomodation cost	-		LS	1	0	0	0.0	0.0	119,796,000	119,796,000	119,796,000	SMC-7
	Experts from 3rd country	-		LS	1	0	0	173,000.0	173,000.0	0	0	19,568,030	SMC-8
	Airfare from 3rd country	-		LS	1	0	0	0.0	0.0	1,299,700	1,299,700	1,299,700	SMC-9
	Allowance	-		LS	1	0	0	103,800.0	103,800.0	0	0	11,740,818	SMC-10
	Accomodation cost	-		LS	1	0	0	0.0	0.0	33,582,000	33,582,000	33,582,000	SMC-11
	Accomodation cost	-		LS	1	0	0	0.0	0.0	28,396,800	28,396,800	28,396,800	SMC-12
	Local staff Remuneration	-		LS	1	991,972,000	991,972,000	0.0	0.0	0	0	82,532,070	SMC-13
	Welfare expense	-		LS	1	0	0	0.0	0.0	4,038,628	4,038,628	4,038,627	SMC-14
	Office supplies	-		LS	1	0	0	0.0	0.0	14,279,433	14,279,433	14,279,433	SMC-15
	Communication cost	-		LS	1	0	0	0.0	0.0	5,336,758	5,336,758	5,336,757	SMC-16
	Social expenses	-		LS	1	0	0	0.0	0.0	5,144,443	5,144,443	5,144,442	SMC-17
	Car Rental Cost	-		LS	1	0	0	0.0	0.0	169,461,760	169,461,760	169,461,760	SMC-18
	Cost for Meeting of Defect Inspection	-		LS	1	0	0	0.0	0.0	2,138,320	2,138,320	2,138,320	SMC-19
	HIV/AIDS Prevension Plan	-		LS	1	19,378,000	19,378,000	0.0	0.0	0	0	1,612,249	SMC-20
	Monitoring equipment setting,Engineer cost	-		LS	1	0	0	0.0	0.0	327,864	327,864	327,864	SMC-21
	Environmental monitoring cost	-		LS	1	0	0	15,600.0	15,600.0	0	0	1,764,516	SMC-22
13. Overhead cost				LS	1	0	0	0.0	0.0	837,236,783	837,236,783	837,236,783	OHC-2
14. Dispute board				LS	1	0	0	0.0	0.0	70,034,400	70,034,400	70,034,400	

Package1 List(1/1)

No.	Item	Specification	Unit	Unit Price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	JPY_Conv.		Local (MMK)	Foreign (USD)	Main (JPY)	JPY_Conv.
PKG1-1	Temporary Road	PKG1	LS	215,950,695	0.0	0	17,967,000	1.0	215,950,695	0.0	0	17,967,097
PKG1-2	Diversion Road	PKG1	LS	157,662,974	0.0	0	13,117,000	1.0	157,662,974	0.0	0	13,117,559
PKG1-3	Temporary Jetty	Jetty No.1	LS	574,437,729	0.0	39,340,636	87,133,000	1.0	574,437,729	0.0	39,340,636	87,133,855
PKG1-4	Temporary Jetty	Jetty No.2	LS	485,427,037	0	51,602,273	91,989,000	1.0	485,427,037	0.0	51,602,273	91,989,802
PKG1-5	Temporary Jetty	for Concrete transportation	LS	109,621,878	0	4,376,875	13,497,000	1.0	109,621,878	0.0	4,376,875	13,497,415
PKG1-6	Reclamation of construction & stockyard	PKG1	LS	1,275,534,608	7,356	0	106,956,000	1.0	1,275,534,608	7,356.2	0	106,956,539
PKG1-7	Foundation_cast in bored pile_RCD	PKG1	LS	3,035,912,272	154,956	110,847,715	380,962,000	1.0	3,035,912,272	154,955.9	110,847,715	380,962,679
PKG1-8	Abutment_1	Pile cap	nos	105,562,512	2,695	2,003,561	11,091,000	1.0	105,562,512	2,695.5	2,003,561	11,091,244
PKG1-9	Abutment_1	Wall, Parapet, Wing wall	nos	30,491,498	0	1,698,642	4,235,000	1.0	30,491,498	0.0	1,698,642	4,235,534
PKG1-10	Pier_on Land	Pile cap_Concrete 24N/mm2	nos	123,334,353	3,275	4,817,212	15,449,000	5.0	616,671,767	16,376.7	24,086,058	77,245,517
PKG1-11	Pier_on Land	Column_24N/mm2_P1-3	nos	28,828,554	0	1,086,951	3,485,000	3.0	86,485,662	0.0	3,260,852	10,456,459
PKG1-12	Pier_on Land	Column_30N/mm2_P4-5	nos	73,016,357	0	3,520,883	9,595,000	2.0	146,032,715	0.0	7,041,765	19,191,686
PKG1-13	Foundation_SPSP	Cable stayed bridge	LS	2,932,505,747	10,250,167	46,454,474	1,449,835,000	1.0	2,932,505,747	10,250,167.3	46,454,474	1,449,835,376
PKG1-14	Pier_on River	Pile cap	nos	183,554,783	0	10,717,957	25,989,000	4.0	734,219,131	0.0	42,871,827	103,958,858
PKG1-15	Pier_on River	Column_30N/mm2	nos	454,219,390	0	15,142,221	52,933,000	4.0	1,816,877,558	0.0	60,568,885	211,733,097
PKG1-16	Approach slab	A1	nos	4,412,466	0	485,872	852,000	1.0	4,412,466	0.0	485,872	852,989
PKG1-17	Superstructure	Cable stayed bridge	LS	3,403,248,292	1,021,630	3,794,833,655	4,193,540,000	1.0	3,403,248,292	1,021,630.0	3,794,833,655	4,193,540,482
PKG1-18	Superstructure	PC box girder_SBS_PKG1	LS	2,485,492,252	1,982,447	345,511,951	776,539,000	1.0	2,485,492,252	1,982,447.2	345,511,951	776,539,513
PKG1-19	Foundation_cast in bored pile_RCD	Ramp	LS	651,101,778	33,761	22,997,087	80,987,000	1.0	651,101,778	33,761.4	22,997,087	80,987,501
PKG1-20	Abutment_0_1(Ramp)	Pile cap	nos	51,545,916	1,603	508,559	4,978,000	1.0	51,545,916	1,602.7	508,559	4,978,460
PKG1-21	Abutment_0_1(Ramp)	Wall, Parapet, Wing wall	nos	14,536,218	0	655,732	1,865,000	1.0	14,536,218	0.0	655,732	1,865,145
PKG1-22	Pier_on Land	Pile cap_Concrete 24N/mm2_PO1-3	nos	45,604,238	1,540	689,530	4,657,000	3.0	136,812,715	4,618.7	2,068,591	13,973,827
PKG1-23	Pier_on Land	Column_24N/mm2_PO1-3	nos	9,608,102	0	672,132	1,471,000	3.0	28,824,306	0.0	2,016,397	4,414,579
PKG1-24	Approach slab	AO1	LS	1,315,285	0	144,275	253,000	1.0	1,315,285	0.0	144,275	253,706
PKG1-25	Superstructure	PC-I girder_Ramp_PKG1	LS	346,833,655	14,821	22,774,291	53,307,000	1.0	346,833,655	14,821.2	22,774,291	53,307,277
PKG1-26	Bridge Name Plate Installation Works	PKG1	LS	1,902,479	0	0	158,000	1.0	1,902,479	0.0	0	158,286
PKG1-27	Approach road	PKG1_Main	LS	93,506,930	0	0	7,779,000	1.0	93,506,930	0.0	0	7,779,776
PKG1-28	Soft Soil Treatment	PKG1_Main road	LS	1,314,613,960	0	54,580,680	163,956,000	1.0	1,314,613,960	0.0	54,580,680	163,956,561
PKG1-29	Mechanically Stabilized Earth Wall	PKG1_Main road	LS	86,674,849	0	6,708,261	13,919,000	1.0	86,674,849	0.0	6,708,261	13,919,608
PKG1-30	Accessory_Approach road	for Approach road_PKG1	LS	37,245,797	0	40,350,435	43,449,000	1.0	37,245,797	0.0	40,350,435	43,449,285
PKG1-31	Approach road	PKG1_Ramp	LS	41,766,798	0	0	3,474,000	1.0	41,766,798	0.0	0	3,474,997
PKG1-32	Soft Soil Treatment	PKG1_Ramp	LS	538,281,144	0	33,594,572	78,379,000	1.0	538,281,144	0.0	33,594,572	78,379,563
PKG1-33	Mechanically Stabilized Earth Wall	PKG1_Ramp	LS	47,882,218	0	4,557,641	8,541,000	1.0	47,882,218	0.0	4,557,641	8,541,441
PKG1-35	Drainage work_approach road	PKG1	LS	361,694,496	0	16,524,492	46,617,000	1.0	361,694,496	0.0	16,524,492	46,617,474
PKG1-36	Pavement on bridge surface	PKG1	LS	593,292,858	0	106,324,858	155,686,000	1.0	593,292,858	0.0	106,324,858	155,686,823
PKG1-37	Pavement_Approach_road_main	PKG1	LS	337,200,039	0	0	28,055,000	1.0	337,200,039	0.0	0	28,055,043
PKG1-38	Pavement_Approach_road_access	PKG1	LS	60,404,453	0	0	5,025,000	1.0	60,404,453	0.0	0	5,025,650
PKG1-39	Pavement_Rigid_Approach_road_Starcity access	PKG1	LS	30,925,000	0	541,617	3,114,000	1.0	30,925,000	0.0	541,617	3,114,576
PKG1-40	Pavement_Side walk_Approach_road	PKG1	LS	5,568,000	0	0	463,000	1.0	5,568,000	0.0	0	463,257
PKG1-41	Pavement_Approach_road_Ramp	PKG1	LS	75,189,917	0	0	6,255,000	1.0	75,189,917	0.0	0	6,255,801
PKG1-58	Inspection Ladder	PKG1	LS	121,803	0	1,017,125	1,027,000	1.0	121,803	0.0	1,017,125	1,027,259
PKG1-42	Electrical work	PKG1	LS	0	0	160,462,724	160,462,000	1.0	0	0.0	160,462,724	160,462,724
PKG1-52	Foundation_SPSP(P7)	3 spans Steel box girder const. from barge(Design change)	nos	455,905,280	1,931,770	5,291,694	261,725,000	1.0	455,905,280	1,931,770.3	5,291,694	261,725,548
PKG1-53	Foundation_SPSP(P6)	3 spans Steel box girder const. from Jetty(Design change)	nos	438,786,327	962,187	5,819,771	151,159,000	1.0	438,786,327	962,187.1	5,819,771	151,159,775
PKG1-54	Pier_on River	Pile cap(Design change)	nos	108,258,319	0	2,540,045	11,547,000	2.0	216,516,638	0.0	5,080,090	23,094,274
PKG1-55	Pier_on River	Column_30N/mm2(Design change)	nos	311,025,509	0	9,864,300	35,741,000	2.0	622,051,018	0.0	19,728,599	71,483,243
PKG1-56	Superstructure	3 spans Steel box girder (Design change)	LS	1,115,776,117	1,338,162	1,632,055,777	1,876,247,000	1.0	1,115,776,117	1,338,162.0	1,632,055,777	1,876,247,853
PKG1-50	Pavement on bridge surface	3 spans Steel box girder (Design change)	LS	322,163,148	0	61,635,243	88,439,000	1.0	322,163,148	0.0	61,635,243	88,439,216
Total									26,244,985,935	17,722,552.1	6,740,423,552	10,928,604,229

PKG1 - 1

Item: Temporary Road Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary road	Type A	962	m2	27,380	0	0	26,339,897	0	0	00-191
Temporary road	Type B	3456	m2	30,480	0	0	105,338,327	0	0	00-6
Temporary road	Type C	742	m2	43,245	0	0	32,087,976	0	0	00-7
Cement stabilization		5408	m3	4,574	0	0	24,733,488	0	0	00-15
Cement material	Flexible container bag	324.48	ton	84,600			27,451,008			Mat-166
Subtotal		1	LS				215,950,695			
Per Unit Price		1	LS				215,950,695	0	0	

PKG1 - 2

Item: Diversion Road Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Diversion road	Section-1	1044	m2	62,275	0	0	65,014,682	0	0	00-197
Diversion road	Section-2	616	m2	102,686	0	0	63,254,681	0	0	00-198
Diversion road	Section-3	472	m2	62,275	0	0	29,393,611	0	0	00-199
Subtotal		1	LS				157,662,974			
Per Unit Price		1	LS				157,662,974	0	0	

PKG1 - 3

Item: Temporary Jetty Reference

Specification: Jetty No.1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	168	t	448,742	0	0	75,388,705	0.00	0	00-24
Temporary_Jetty	Deck pannel	1248	m2	33,187	0	0	41,417,775	0.00	0	00-25
Temporary_Jetty	Guared rail installation	220	m	1,021	0	0	224,532	0.00	0	00-26
Temporary_Jetty	H400_L=40.7m_Pile_Driving_25m	52	nos	1,693,266	0	0	88,049,813	0.00	0	00-27
Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	213.43	t	686,036	0	0	146,420,751	0.00	0	00-28
Temporary Jetty	Guide(Pile)install_Driving_below13m H300	42	nos	483,790	0	0	20,319,188	0.00	0	00-29
Temporary Jetty	Guide(Frame)Install / Remove	52	nos	212,361	0	0	11,042,783	0.00	0	00-30
Temporary Jetty	Guide(Pile)Pulling_below13m H300	42	nos	260,502	0	0	10,941,101	0.00	0	00-31
Temporary Jetty	Remove superstructure	168	t	245,450	0	0	41,235,642	0.00	0	00-149
Temporary Jetty	Remove_deck pannel	1248	m2	16,689	0	0	20,828,371	0.00	0	00-150
Temporary Jetty	Remove_Gurad rail	220	m	966	0	0	212,505	0.00	0	00-151
Temporary Jetty	H400_L=40m_Pile remove_Pulling25m	52	nos	317,421	0	0	16,505,913	0.00	0	00-152
Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	213.43	t	477,209	0	0	101,850,651	0.00	0	00-153
Temprary Jetty No.1	Material	1	LS	0	0	39,340,636	0	0.00	39,340,636	00-200
Subtotal		1	LS				574,437,729		39,340,636	
Per Unit Price		1	LS				574,437,729	0	39,340,636	

PKG1 - 4

Item: Temporary Jetty Reference

Specification: Jetty No.2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	103.9	t	448,742	0	0	46,624,324	0.00	0	00-24
Temporary_Jetty	Deck pannel	936	m2	33,187	0	0	31,063,332	0.00	0	00-25
Temporary_Jetty	Guared rail installation	238	m	1,021	0	0	242,903	0.00	0	00-26
Temporary Jetty	H400_L=22.7m_Pile install_Driving_20m	133	nos	1,128,844	0	0	150,136,220	0.00	0	00-27
Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	63.24	t	686,036	0	0	43,384,943	0.00	0	00-28
Temporary Jetty	Guide(Pile)Install_Driving_below10m H300	107	nos	398,415	0	0	42,630,452	0.00	0	00-204
Temporary Jetty	Guide(Frame)Install / Remove	133	nos	212,361	0	0	28,244,041	0.00	0	00-30
Temporary Jetty	Guide(Pile)Remove_Pulling_below10m_H300	107	nos	225,769	0	0	24,157,256	0.00	0	00-205
Temporary Jetty	Remove superstructure	103.9	t	245,450	0	0	25,502,281	0.00	0	00-149
Temporary Jetty	Remove_deck pannel	936	m2	16,689	0	0	15,621,278	0.00	0	00-150
Temporary Jetty	Remove_Gurad rail	238	m	966	0	0	229,891	0.00	0	00-151
Temporary Jetty	H400_L=22.7m_Pile remove_Pulling_20m	133	nos	356,477	0	0	47,411,438	0.00	0	00-206
Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	63.24	t	477,209	0	0	30,178,678	0.00	0	00-153
Temprary Jetty No.2	Material	1	LS	0	0	51,602,273	0	0.00	51,602,273	00-201
Subtotal		1	LS				485,427,037		51,602,273	
Per Unit Price		1	LS				485,427,037	0	51,602,273	

PKG1 - 5

Item: Temporary Jetty Reference

Specification: for Concrete transportation 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	18.11	t	448,742	0	0	8,126,723	0.00	0	00-24
Temporary_Jetty	Deck pannel		m2	33,187	0	0	0	0.00	0	00-25
Temporary_Jetty	Guared rail installation	71.2	m	1,021	0	0	72,667	0.00	0	00-26
Temporary Jetty	H400_L=27.5m_Pile install_Driving_20m	39	nos	1,128,844	0	0	44,024,907	0.00	0	00-207
Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	9.22	t	686,036	0	0	6,325,256	0.00	0	00-28
Temporary Jetty	Guide(Pile)Istallation_Driving_Below10m_H300	32	nos	398,415	0	0	12,749,294	0.00	0	00-208
Temporary Jetty	Guide(Frame)Install / Remove	39	nos	212,361	0	0	8,282,087	0.00	0	00-30
Temporary Jetty	Guide(Pile)Remove_pulling_below10m_H300	32	nos	225,769	0	0	7,224,600	0.00	0	00-209
Temporary Jetty	Remove superstructure	18.11	t	245,450	0	0	4,445,104	0.00	0	00-149
Temporary Jetty	Remove_deck pannel		m2	16,689	0	0	0	0.00	0	00-150
Temporary Jetty	Remove_Gurad rail	71.2	m	966	0	0	68,774	0.00	0	00-151
Temporary Jetty	H400_L=27.5m_Pile remove_Pulling_20m	39	nos	356,477	0	0	13,902,602	0.00	0	00-210
Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	9.22	t	477,209	0	0	4,399,864	0.00	0	00-153
Inclined Jetty	Material	1	LS	0	0	4,376,875	0	0.00	4,376,875	00-202
Subtotal		1	LS				109,621,878		4,376,875	
Per Unit Price		1	LS				109,621,878	0	4,376,875	

PKG1 - 6 87,133,855

Item: Reclamation of construction & stockyard Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	35146.857	m3	16,802	0.00	0.00	590,521,675	0.00	0	01-179
Shaping slope of embankment	By machinery for Sand soil	282	m2	2,479	0.00	0	699,086	0.00	0	00-19
Sodding	on slope	282	m2	1,169	0.00	0	329,604	0.00	0	00-33
Sheet pile driving	Nmax<50,Type III,shorter than 12m	285	nos	20,837	9.22	0.00	5,938,479	2,627.70	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	285	nos	11,788	5.35	0.00	3,359,623	1,524.75	0	00-92
Steel sheet pile	Type III	205.2	ton	927,504			190,323,821			Mat-163
Scrap	70%	-0.7		190,323,821			(133,226,675)			
Sheet pile driving	Nmax<50,Type II,shorter than 9m	275	nos	15,902	7.04	0.00	4,372,981	1,936.00	0	00-183
Sheet pile pulling	Nmax<50,shorter than 9m	275	nos	10,162	4.61	0.00	2,794,602	1,267.75	0	00-184
Steel sheet pile	Type II	105.6	ton	905,424			95,612,753			Mat-164
Scrap	70%	-0.7		95,612,753			(66,928,927)			
Cement stabilization		33029.5	m3	4,574	0.00	0.00	151,060,418	0.00	0	00-15
Cement material	Flexible container bag	1981.770	t	84,600			167,657,742			Mat-166
*Volume=[Area(11100+1513+9164+5380+1170)*1m+Area(1076+1173+832+2244+1075+3005)*0.5m]*60kg/m3										
Base course leveling(Only compaction	Subbase t=200mm	9100	m2	980	0.00	0.00	8,916,453	0.00	0	00-187
	=(1050+770)m2*5 Layers									
TypeA	Concrete_t:10cm_Class E	1627	m3	103,988	0.00	0.00	169,188,460	0.00	0	00-188
TypeB	Asphalt_t:5cm	3200	m2	10,589	0.00	0.00	33,884,640	0.00	0	00-189
TypeC	Crushed stone_t:15cm	16467	m2	3,099	0.00	0.00	51,029,871	0.00	0	00-190
Subtotal		1	LS				1,275,534,608	7,356		
Per Unit Price		1	LS				1,275,534,608	7,356	0	

PKG1 - 7

Item: Foundation_cast in bored pile_RCD Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile Cast in Site_A1	RCD pile φ1500_L=53.0m	28	nos	21,690,896	1,378.9	679,801	607,345,099	38,609.8	19,034,428	00-40
Pile Cast in Site_P1	RCD pile φ2000_L=58.0m	12	nos	34,868,078	1,642.4	1,344,665	418,416,937	19,708.7	16,135,980	00-41
Pile Cast in Site_P2	RCD pile φ2000_L=62.0m	12	nos	37,988,943	1,894.2	1,344,665	455,867,312	22,729.9	16,135,980	00-42
Pile Cast in Site_P3	RCD pile φ2000_L=57.0m	12	nos	34,652,178	1,642.4	1,406,014	415,826,133	19,708.7	16,872,168	00-43
Pile Cast in Site_P4	RCD pile φ2000_L=57.5m	12	nos	35,955,955	1,642.4	1,459,615	431,471,459	19,708.7	17,515,380	00-44
Pile Cast in Site_P5	RCD pile φ2000_L=55.5m	21	nos	33,665,968	1,642.4	1,197,799	706,985,332	34,490.2	25,153,779	00-45
Subtotal		1	LS				3,035,912,272	154,956	110,847,715	
Per Unit Price		1	LS				3,035,912,272	154,956	110,847,715	

PKG1 - 8

Item: Abutment_1 Reference

Specification: Pile cap 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Excavation	Leveling of bottom	758.3	m3	2,098	0.0	0	1,590,633	0.00	0	00-87
Transportation of excavated soil		947.9	m3	2,970	0.0	0	2,814,715	0.00	0	00-77
Backfilling	Class_C,1m＜W1＜4m_Borrow material	172.3	m3	20,940	0	0	3,608,002	0.00	0	00-76
Leveling	by Machine	258.6	m2	365	0	0	94,260	0.00	0	00-75
Crush stone base work	Crush stone,t=20cm	258.6	m2	2,604	0.0	0	673,371	0.00	0	01-33
Concrete work(1)	18N/mm2	25.9	m3	95,194	0	0	2,465,536	0.00	0	00-52
Form work	for level concrete	6.7	m2	448	0.0	0	3,002	0.00	0	01-24
Concrete work for Pier(2)_On land	Class D	478.8	m3	91,334.54	0.00	0.00	43,730,978	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	125.4	m2	8,784.71	0.00	0.00	1,101,603	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.185	ton	126,764	0.0	78,422	23,451	0.00	14,508	00-79
Rebar work_SD345	Arranging D16-D25	11.187	ton	114,348	0.0	81,271	1,279,206	0.00	909,179	00-80
Rebar work_SD345	Arranging D29-D32	12.998	ton	80,841	0.0	83,080	1,050,766	0.00	1,079,874	00-81
Rebar work_SD345	Assembling D13	0.185	ton	154,137	0.0	0	28,515	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	11.187	ton	128,135	0.0	0	1,433,442	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	12.998	ton	78,633	0.0	0	1,022,069	0.00	0	00-84
Sheet pile driving	Nmax<50,Type III,shorter than 12m	185	nos	20,837	9.2	0	3,854,802	1,705.70	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	185	nos	11,788	5.4	0	2,180,808	989.75	0	00-92
Steel sheet pile	Typeⅱ	138.750	ton	927,504	0.0	0	128,691,180	0.00	0	Mat-163
Depreciation	70%	-0.7		128,691,180	0.0	0	(90,083,826)	0.00	0	
Subtotal		1	nos				105,562,512	2,695	2,003,561	
Per Unit Price		1	nos				105,562,512	2,695	2,003,561	

PKG1 - 9

Item: Abutment_1 Reference

Specification: Wall, Parapet, Wing wall 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	156.4	m3	91,335	0	0	14,284,722	0	0	00-78
Form work	for ordinal concrete_with&without rebar	324.8	m2	8,785	0	0	2,853,274	0	0	01-22
Rebar work_SD345	Arranging D13	0.214	ton	126,764	0	78,422	27,127	0	16,782	00-79
Rebar work_SD345	Arranging D16-D25	5.242	ton	114,348	0	81,271	599,410	0	426,023	00-80
Rebar work_SD345	Arranging D29-D32	15.116	ton	80,841	0	83,080	1,221,986	0	1,255,837	00-81
Rebar work_SD345	Assembling D13	0.214	ton	154,137	0	0	32,985	0	0	00-82
Rebar work_SD345	Assembling D16-D25	5.242	ton	128,135	0	0	671,681	0	0	00-83
Rebar work_SD345	Assembling D29-D32	15.116	ton	78,633	0	0	1,188,613	0	0	00-84
Miscellaneous work	Form work_Cylindrical type φ170	19	nos	137,517	0	0	2,612,831	0	0	00-85
Falsework	Scaffloding (Handrail precede type)	0	m2	17,532	0	0	0	0	0	00-86
Supporting	Wedge type	306.8	m3	17,796	0	0	5,459,840	0	0	02-237
Non-shrink Mortar		0.600	m3	2,565,045	0	0	1,539,027	0	0	02-229
Subtotal		1	nos				30,491,498		1,698,642	
Per Unit Price		1	nos				30,491,498	0	1,698,642	

PKG1 - 10

Item: Pier_on Land Reference

Specification: Pile cap_Concrete 24N/mm2 5 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Excavation	Leveling of bottom	4255.6	m3	2,098	0.0	0	8,926,674	0.00	0	00-87
Transportation of excavated soil	0	5319.5	m3	2,970	0.0	0	15,796,255	0.00	0	00-77
Backfilling	Class_C,1m＜W1＜4m_Borrow material	1327.5	m3	20,940	0	0	27,798,155	0.00	0	00-76
Leveling	by Machine	1282.6	m2	365	0	0	467,508	0.00	0	00-75
Crush stone base work	Crush stone,t=20cm	1282.6	m2	2,604	0.0	0	3,339,775	0.00	0	01-33
Concrete work(1)	18N/mm2	123.4	m3	95,194	0	0	11,746,995	0.00	0	00-52
Form work	for level concrete	33.1	m2	448	0.0	0	14,832	0.00	0	01-24
Concrete work for Pier(2)_On land	Class D	2408.6	m3	91,334.54	0.00	0.00	219,988,373	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	627.4	m2	8,784.71	0.00	0.00	5,511,527	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Arranging D16-D25	64.892	ton	114,348	0.0	81,271	7,420,243	0.00	5,273,838	00-80
Rebar work_SD345	Arranging D29-D32	226.435	ton	80,841	0.0	83,080	18,305,134	0.00	18,812,220	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0.0	0	0	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	64.892	ton	128,135	0.0	0	8,314,909	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	226.435	ton	78,633	0.0	0	17,805,214	0.00	0	00-84
Sheet pile driving	Nmax<50,Type III,shorter than 12m	1124	nos	20,837	9.2	0	23,420,529	10,363.28	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	1124	nos	11,788	5.4	0	13,249,881	6,013.40	0	00-92
Steel sheet pile	6×50	843.000	ton	927,504	0.0	0	781,885,872	0.00	0	Mat-163
Depreciation	70%	-0.7		781,885,872	0.0	0	(547,320,110)	0.00	0	
Subtotal		5	nos				616,671,767	16,377	24,086,058	
Per Unit Price		1	nos				123,334,353	3,275	4,817,212	

PKG1 - 11

Item: Pier_on Land Reference

Specification: Column_24N/mm2_P1-3 3 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	494.5	m3	91,334.54	0.00	0.00	45,164,930.03	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	438.5	m2	8,784.71	0.00	0.00	3,852,095.34	0.00	0	01-22
Rebar work_SD345	Arranging D13	1.421	ton	126,763.52	0.00	78,422.00	180,130.96	0.00	111,438	00-79
Rebar work_SD345	Arranging D16-D25	38.752	ton	114,347.57	0.00	81,271.00	4,431,197.03	0.00	3,149,414	00-80
Rebar work_SD345	Arranging D29-D32		ton	80,840.57	0.00	83,080.00	0.00	0.00	0	00-81
Rebar work_SD345	Assembling D13	1.421	ton	154,136.93	0.00	0.00	219,028.58	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	38.752	ton	128,134.58	0.00	0.00	4,965,471.24	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	0.000	ton	78,632.78	0.00	0.00	0.00	0.00	0	00-84
Miscellaneous work	Form work_Cylindrical type ϕ170	60	nos	137,517.42	0.00	0	8,251,045.20	0.00	0	00-85
Falsework	Scaffloding (Handrail precede type)	537.2	m2	17,531.81	0.00	0	9,418,088.33	0.00	0	00-86
Supporting	Wedge type	0	m3	17,796.09	0.00	0	0.00	0.00	0	02-237
Non-shrink Mortar		3.900	m3	2,565,045	0	0	10,003,676	0	0	02-229
Subtotal		3	nos				86,485,662		3,260,852	
Per Unit Price		1	nos				28,828,554	0	1,086,951	

PKG1 - 12

Item: Pier_on Land Reference

Specification: Column_30N/mm2_P4-5 2 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class C I	953.9	m3	97,031	0	0	92,557,795	0	0	00-56
Form work	for ordinal concrete_with&without rebar	659.2	m2	8,785	0	0	5,790,881	0	0	01-22
Rebar work_SD345	Arranging D13	2.150	ton	126,764	0	78,422	272,542	0	168,607	00-79
Rebar work_SD345	Arranging D16-D25	57.529	ton	114,348	0	81,271	6,578,301	0	4,675,439	00-80
Rebar work_SD345	Arranging D29-D32	15.321	ton	80,841	0	83,080	1,238,558	0	1,272,869	00-81
Rebar work_SD345	Assembling D13	2.150	ton	154,137	0	0	331,394	0	0	00-82
Rebar work_SD345	Assembling D16-D25	57.529	ton	128,135	0	0	7,371,454	0	0	00-83
Rebar work_SD345	Assembling D29-D32	15.321	ton	78,633	0	0	1,204,733	0	0	00-84
Rebar work_SD390	Arranging D16-D25	9.152	ton	114,348	0	79,372	1,046,509	0	726,413	00-212
Rebar work_SD390	Arranging D29-D32	0	ton	80,841	0	80,321	0	0	0	00-213
Rebar work_SD390	Assembling D16-D25	9.152	ton	128,135	0	0	1,172,688	0	0	00-215
Rebar work_SD390	Assembling D29-D32	0	ton	78,633	0	0	0	0	0	00-216
Miscellaneous work	Form work_Cylindrical type ϕ170	40	nos	137,517	0	0	5,500,697	0	0	00-85
Non-shrink Mortar		3.000	m3	2,565,045	0	0	7,695,135	0	0	02-229
Falsework	Scaffloding (Handrail precede type)	0	m2	17,532	0	0	0	0	0	00-86
Supporting	Wedge type	816.9	m3	17,796	0	0	14,537,626	0	0	02-237
Installation of barrier, railing		51.78	m	4,312	0	0	223,263	0	0	01-134
Fabrication_Railing on pier	P5(PKG1)	1	LS	511,139	0	198,437	511,139	0	198,437	01-198
Subtotal		2	nos				146,032,715		7,041,765	
Per Unit Price		1	nos				73,016,357	0	3,520,883	

PKG1 - 13

Item: Foundation_SPSP Reference

Specification: Cable stayed bridge 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	56	nos	308,832	668.4	47,822	17,294,577	37,432.6	2,678,054	00-57
Guide	Guide(Frame)Falswork_Install	212.8	t	77,660	1,924.2	19,969	16,526,031	409,469.8	4,249,361	00-58
Steel Pipe Sheet Pile Driving	Cable stayed bridge(350 t CC & 275 t CC)	1	LS	1,378,480,824	4,771,318.6	0	1,378,480,824	4,771,318.6	0	00-59
Material cost	Steel Pipe Sheet Pile	1	LS	0	4,958,802.3	0	0	4,958,802.3	0	00-60
Excavation inside of the pipe pile		2004	m3	91,385	0.0	0	183,135,520	0.0	0	00-61
Concrete Filling to Steel Pipe		1618.4	m3	116,062	0.0	0	187,834,142	0.0	0	00-62
Cleaning of Inside joint pipe		10359	m	7,453	1.4	0	77,206,456	14,709.8	0	00-63
Mortar filling of Inside joint pipe		9868.9	m	3,457	0.0	103	34,120,537	0.0	1,016,595	00-64
Sealing of Inside joint pipe	P-P_type	2082.4	m	1,854	0.0	621	3,861,665	0.0	1,292,608	00-65
Excavation inside of the well		7967.7	m3	22,464	6.5	0	178,985,058	51,790.1	0	00-66
Spread sand		389	m3	53,032	10.0	0	20,629,289	3,886.1	0	00-67
Bottom slab concrete		1926.6	m3	138,022	0.0	0	265,912,588	0.0	0	00-68
Falswork Install / Remove	Install65%_Remove35%	454.6	t	771,851	0.0	20,125	350,883,360	0.0	9,148,916	00-69
Concrete filling to space between steel pipe well and wale		124.4	m3	671,092	0.0	0	83,483,832	0.0	0	00-70
Welding of the dowel	Stud welding_1,000mm 1 row 4nos	3040	nos	7,286	0.0	2,994	22,148,011	0.0	9,101,699	00-71
Welding of the dowel	Stud welding_700mm 1 row 4nos	6728	nos	7,286	0.0	2,819	49,017,046	0.0	18,967,241	00-72
Steel pipe sheet pile Cut&Removal		184	nos	342,320	15.0	0	62,986,810	2,758.2	0	00-73
Subtotal		1	LS				2,932,505,747	10,250,167	46,454,474	
Per Unit Price		1	LS				2,932,505,747	10,250,167	46,454,474	

PKG1 - 14

Item: Pier_on River Reference

Specification: Pile cap 4 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile cap										
Pile cap_on River	Class D	3697.2	m3	105,754	0	0	390,993,947.60	0.00	0	00-50
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0.00	0.00	0	00-79
Rebar work_SD345	Arranging D16-D25	39.258	ton	114,348	0.0	81,271	4,489,056.90	0.00	3,190,537	00-80
Rebar work_SD345	Arranging D29-D32	17.344	ton	80,841	0.0	83,080	1,402,098.85	0.00	1,440,940	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0.0	0	0.00	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	39.258	ton	128,135	0.0	0	5,030,307.34	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	17.344	ton	78,633	0.0	0	1,363,806.94	0.00	0	00-84
Rebar work_SD345	Arranging D38	62.904	ton	126,764	0	81,271	7,973,932.46	0.00	5,112,271	00-226
Rebar work_SD345	Arranging D51	276.724	ton	126,764	0	83,080	35,078,508.31	0.00	22,990,230	00-228
Rebar work_SD345	Assembling D38	62.904	ton	154,137	0	0	9,695,829.44	0.00	0	00-230
Rebar work_SD345	Assembling D51	276.724	ton	154,137	0	0	42,653,387.82	0.00	0	00-232
Mechanical joint	D35, deformed bar	220	nos	0	0	2,493	0.00	0.00	548,460	Mat-292
Mechanical joint	D38, deformed bar	348	nos	0	0	3,006	0.00	0.00	1,046,088	Mat-293
Mechanical joint	D51, deformed bar	1072	nos	0	0	5,832	0.00	0.00	6,251,904	Mat-295
Crawler crane	50～55t hang	135.00	day	297,147.20	0.00		40,114,872.00	(0.00)		OPE-26
Barge	800t	135.00	day	1,388,221.15	0.00	0	187,409,855.77	(0.00)	0	Mac-d(20)
*7.5 months of pile cap schedule										
estimated about 60 % is for Rebar work										
= 7.5 months * 0.6 = 4.5 month	4.5 months * 30 days = 135 days									
Rebar work_SD345	Arranging D35	28.528	ton	126,764	0	80,321	3,616,309.70	0.00	2,291,397	00-225
Rebar work_SD345	Assembling D35	28.528	ton	154,137	0	0	4,397,218.34	0.00	0	00-229
Subtotal		4	nos				734,219,131		42,871,827	
Per Unit Price		1	nos				183,554,783	0	10,717,957	

PKG1 - 15

Item: Pier_on River Reference

Specification: Column_30N/mm2 4 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pier										
Concrete work for Pier(2)_On river	Class C I	7799	m3	111,351	0	0	868,425,981	0	0	00-89
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0	78,422	0	0	0	00-79
Rebar work_SD345	Arranging D16-D25	332.159	ton	114,348	0	81,271	37,981,575	0	26,994,894	00-80
Rebar work_SD345	Arranging D29-D32	146.077	ton	80,841	0	83,080	11,808,948	0	12,136,077	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0	0	0	0	0	00-82
Rebar work_SD345	Assembling D16-D25	332.159	ton	128,135	0	0	42,561,054	0	0	00-83
Rebar work_SD345	Assembling D29-D32	146.077	ton	78,633	0	0	11,486,441	0	0	00-84
Rebar work_SD345	Arranging D38	0	ton	126,764	0	81,271	0	0	0	00-226
Rebar work_SD345	Arranging D51	176.674	ton	126,764	0	83,080	22,395,818	0	14,678,076	00-228
Rebar work_SD345	Assembling D38	0	ton	154,137	0	0	0	0	0	00-230
Rebar work_SD345	Assembling D51	176.674	ton	154,137	0	0	27,231,988	0	0	00-232
Mechanical joint	D38, deformed bar	0	nos	0	0	3,006	0	0	0	Mat-293
Mechanical joint	D51, deformed bar	824	nos	0	0	5,832	0	0	4,805,568	Mat-295
Crawler crane	50～55t hang	198.00	day	297,147.20	0.00		58,835,145.60	(0.00)		OPE-26
Barge	800t	198.00	day	1,388,221.15	0.00	0	274,867,788.46	(0.00)	0	Mac-d(20)
*11 months of pier schedule, about 60% is for rebar work_ 11months*0.6*30days										
Non-shrink Mortar		8.796	m3	2,565,045	0	0	22,562,136	0	0	02-229
Form work	Ordinal type	1364.8	m2	13,806	0	0	18,843,043	0	0	00-156
Form work	Plywood curved panel	2083.4	m2	17,762	0	0	37,004,517	0	0	00-157
Scaffolding	Hand rail precede type	4282	m2	9,747	0	289	41,734,898	0	1,235,914	00-158
Supporting	Wedge type	3122	m3	17,796	0	0	55,559,393	0	0	02-237
Bracket support	Pierhead_coping	1	LS	283,034,662	0	0	283,034,662	0	0	00-159
Installation of barrier, railing		186.6	m	4,312	0	0	804,574	0	0	01-134
Fabrication_Railing on pier	Cable stayed bridge(PKG1)	1	LS	1,739,596	0	718,356	1,739,596	0	718,356	01-199
Subtotal		4	nos				1,816,877,558		60,568,885	
Per Unit Price		1	nos				454,219,390	0	15,142,221	

PKG1 - 16

Item: Approach slab Reference

Specification: A1 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	31.40	m3	99,456	0	0	3,122,928	0	0	00-51
Rebar work_SD345	Arranging D13	0.326	ton	126,764	0	78,422	41,325	0	25,566	00-79
Rebar work_SD345	Arranging D16-D25	2.640	ton	114,348	0	81,271	301,878	0	214,555	00-80
Rebar work_SD345	Arranging D29-D32	2.958	ton	80,841	0	83,080	239,126	0	245,751	00-81
Rebar work_SD345	Assembling D13	0.326	ton	154,137	0	0	50,249	0	0	00-82
Rebar work_SD345	Assembling D16-D25	2.640	ton	128,135	0	0	338,275	0	0	00-83
Rebar work_SD345	Assembling D29-D32	2.958	ton	78,633	0	0	232,596	0	0	00-84
Form work	for ordinal concrete_with&without rebar	9.80	m2	8,785	0	0	86,090	0	0	01-22
Subtotal		1	nos				4,412,466		485,872	
Per Unit Price		1	nos				4,412,466	0	485,872	

PKG1 - 17

Item: Superstructure Reference

Specification: Cable stayed bridge 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks	
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)		
Fabrication of steel tower		1	L.S.	0	0	256,185,318	0	0	256,185,000	Quatation	
Fabrication of steel girder		1	L.S.	0	0	2,020,904,953	0	0	2,020,905,000	Quatation	
Erection of tower		1	L.S.	449,679,433	335,005	2,039,100	449,680,000	335,000	2,039,000	00-98	
Erection of main girder	Side span	1	L.S.	1,553,014,709	686,628	149,729,066	1,553,010,000	686,630	149,729,000	00-99	
Erection of main girder	by erection nose for Main span(1 set)	2	each	77,170,000	0	91,534,000	154,340,000	0	183,068,000	00-181	
Stressing of PC cable	Cable stayed bridge	1	LS	275,119,479	0	339,991,090	275,120,000	0	339,991,000	00-100	
Steel deck welding in site	Automatic welding equipment	4909.68	m	98,825	0	17,132	485,198,733	(0.00)	84,113,178	01-83	
Dead-bolting including temporary ere	Main girder	186,808	nos	286	0	47	53,393,463	(0.00)	8,854,699	01-85	
Painting in site	Tower and Girder	1	LS	70,483,258	0	18,735,020	70,480,000	0	18,735,000	00-101	
Bearing setting	Cable stayed bridge	1	LS	16,100,461	0	564,030,000	16,100,000	0	564,030,000	00-102	
Expaansion Joint setting	Cable stayed bridge	1	LS	6,155,168	0	70,154,752	6,160,000	0	70,155,000	00-103	
Wheel Guard & Median Strip	Cast in site_Cable stayed bridge	1	LS	18,476,120	0	1,773,414	18,480,000	0	1,773,000	00-161	
Installation of barrier, railing		1790	m	4,312	0	0	7,718,050	0	0	01-134	
Barrier Fabrication	Cable Stayed Bridge	1	LS	2,678,046	0	42,608,778	2,678,046	0	42,608,778	01-135	
Drainage work	For Any	140	nos	13,704	0	53,767	1,920,000	0	7,527,000	00-106	
Stay Cable Damping Device	Setting and Material cost	40	nos	1,519	0	576,900	60,000	0	23,076,000	00-107	
Transportation in site(Block)	Special trailer 40 t	17	month	11,555,709	0	0	196,450,000	0.0	0	01-104	
Temporary placing	by 70 t CC	530	block	38,912	0	0	20,620,000	0.0	0	01-105	
Transportation in site(Segment&Con.	by Carriage (carriage length: below 200m)	107	nos	294,178	0	0	31,480,000	0.0	0	01-107	
Loading on barge	by 200 t CC and 200 t TC	107	Time	319,983	0	0	34,240,000	0.0	0	01-108	
Facilities and Concrete Base for Reas	(Package-1)	0.7	LS	37,321,151	0	31,491,600	26,120,000	0	22,044,000	00-179	share PKG1-56
Accessory&Miscellaneous work	Cable Stayed Bridge	0	LS	0	0	45,966,298	0	0	0	00-162	
Subtotal		1	LS				3,403,248,292	1,021,630	3,794,833,655		
Per Unit Price		1	LS				3,403,248,292	1,021,630	3,794,833,655		

PKG1 - 18

Item: Superstructure Reference

Specification: PC box girder_SBS_PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication of precast segment	Short line matching method	1	LS	1,404,413,261	473,525	59,036,744	1,404,413,261	473,525	59,036,744	00-169
Erection	Span by Span method	1	LS	603,971,201	0	129,689,896	603,971,201	0	129,689,896	00-170
Prestressing		1	LS	267,627,792	0	85,126,364	267,627,792	0	85,126,364	00-171
Bearing setting	PC Box(PKG1)	1	LS	19,011,307	1,508,922	0	19,011,307	1,508,922	0	00-172
Expansion joint setting	PC Box	1	LS	2,343,822	0	25,065,000	2,343,822	0	25,065,000	00-173
Wheel Guard & Median Strip	Cast in site_PC box_PKG1	1	LS	45,697,138	0	1,599,809	45,700,000	0	1,600,000	00-299
Installation of barrier, railing	0	1000	m	4,312	0	0	4,311,760	0	0	01-134
Barrier Fabrication	PC box	1	LS	1,494,349	0	23,775,698	1,494,349	0	23,775,698	00-175
Drainage work	PC box	1	LS	15,287,574	0	1,397,943	15,287,574	0	1,397,943	00-176
Manhole cover	PC box	4	nos	224,710	0	16,843	898,840	0	67,371	00-177
Pier Head Cast in Place_temporary expense		5	pier	14,779,967	0	373,627	73,899,836	0	1,868,135	00-182
Pier head temporary bearing										
Pier head temporary bearing	200 t hydraulic jack*16 nos/pier*6 month*30 d	8,640	nos-day			2,070			17,884,800	CEDC_18-7_200-001
	*only for 3 piers under erection girder									
Concrete cast in place										
Form fabrication, installation, and removal		460.00	m2	26,799	0	0	12,327,664	0	0	01-257
Concrete (Cast-in-place)	50 Mpa	300	m3	114,016	0	0	34,204,845	0	0	01-259
Subtotal		1	LS				2,485,492,252	1,982,447	345,511,951	
Per Unit Price		1	LS				2,485,492,252	1,982,447	345,511,951	

PKG1 - 19

Item: Foundation_cast in bored pile_RCD Reference

Specification: Ramp 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile Cast in Site_AO1	RCD pile φ1500_L=56.5m	9	nos	22,399,207	1,378.92	679,801	201,592,859	12,410.28	6,118,209	00-46
Pile Cast in Site_PO1	RCD pile φ2000_L=57.0m	5	nos	34,618,017	1,642.39	1,406,238	173,090,087	8,211.95	7,031,190	00-47
Pile Cast in Site_PO2	RCD pile φ2000_L=57.5m	4	nos	34,458,024	1,642.39	1,228,676	137,832,097	6,569.56	4,914,704	00-48
Pile Cast in Site_PO3	RCD pile φ2000_L=58.0m	4	nos	34,646,684	1,642.39	1,233,246	138,586,734	6,569.56	4,932,984	00-49
Subtotal		1	LS				651,101,778	33,761	22,997,087	
Per Unit Price		1	LS				651,101,778	33,761	22,997,087	

PKG1 - 20

Item: Abutment_O_1(Ramp) Reference

Specification: Pile cap 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Excavation	Leveling of bottom	843.8	m3	2,098	0.0	0	1,769,980	0.00	0	00-87
Transportation of excavated soil	0	1054.8	m3	2,970	0.0	0	3,132,080	0.00	0	00-77
Backfilling	Class_C,1m＜W1＜4m_Borrow material	147.3	m3	20,940	0	0	3,084,496	0.00	0	00-76
Leveling	by Machine	84.6	m2	365	0	0	30,837	0.00	0	00-75
Crush stone base work	Crush stone,t=20cm	84.6	m2	2,604	0.0	0	220,291	0.00	0	01-33
Concrete work(1)	18N/mm2	8.5	m3	95,194	0	0	809,153	0.00	0	00-52
Form work	for level concrete	3.7	m2	448	0.0	0	1,658	0.00	0	01-24
Concrete work for Pier(2)_On land	Class D	153.9	m3	91,334.54	0.00	0.00	14,056,386	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	68.4	m2	8,784.71	0.00	0.00	600,874	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.139	ton	126,764	0.0	78,422	17,620	0.00	10,901	00-79
Rebar work_SD345	Arranging D16-D25	3.485	ton	114,348	0.0	81,271	398,501	0.00	283,229	00-80
Rebar work_SD345	Arranging D29-D32	2.581	ton	80,841	0.0	83,080	208,650	0.00	214,429	00-81
Rebar work_SD345	Assembling D13	0.139	ton	154,137	0.0	0	21,425	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	3.485	nos	128,135	0.0	0	446,549	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	2.581	ton	78,633	0.0	0	202,951	0.00	0	00-84
Sheet pile driving	Nmax<50,Type III,shorter than 12m	110	nos	20,837	9.2	0	2,292,045	1,014.20	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	110	nos	11,788	5.4	0	1,296,697	588.50	0	00-92
Steel sheet pile	TypeIII	82.500	ton	927,504	0.0	0	76,519,080	0.00	0	Mat-163
Depreciation	70%	-0.7		76,519,080	0.0	0	(53,563,356)	0.00	0	
Subtotal		1	nos				51,545,916	1,603	508,559	
Per Unit Price		1	nos				51,545,916	1,603	508,559	

PKG1 - 21

Item: Abutment_O_1(Ramp) Reference

Specification: Wall, Parapet, Wing wall 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	78.2	m3	91,335	0	0	7,142,361	0	0	00-78
Form work	for ordinal concrete_with&without rebar	191.9	m2	8,785	0	0	1,685,786	0	0	01-22
Rebar work_SD345	Arranging D13	0.206	ton	126,764	0	78,422	26,113	0	16,155	00-79
Rebar work_SD345	Arranging D16-D25	6.277	ton	114,348	0	81,271	717,760	0	510,138	00-80
Rebar work_SD345	Arranging D29-D32	1.558	ton	80,841	0	83,080	125,950	0	129,439	00-81
Rebar work_SD345	Assembling D13	0.206	ton	154,137	0	0	31,752	0	0	00-82
Rebar work_SD345	Assembling D16-D25	6.277	nos	128,135	0	0	804,301	0	0	00-83
Rebar work_SD345	Assembling D29-D32	1.558	ton	78,633	0	0	122,510	0	0	00-84
Miscellaneous work	Form work_Cylindrical type ϕ170	6	nos	137,517	0	0	825,105	0	0	00-85
Falsework	Scaffloding (Handrail precede type)	159.6	m2	17,532	0	0	2,798,077	0	0	00-86
Supporting	Wedge type	0	m3	17,796	0	0	0	0	0	02-237
Non-shrink Mortar		0.100	m3	2,565,045	0	0	256,505	0	0	02-229
Subtotal		1	nos				14,536,218		655,732	
Per Unit Price		1	nos				14,536,218	0	655,732	

PKG1 - 22

Item: Pier_on Land Reference

Specification: Pile cap_Concrete 24N/mm2_P01-3 3 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Excavation	Leveling of bottom	843.8	m3	2,098	0.0	0	1,769,980	0.00	0	00-87
Transportation of excavated soil	0	1054.8	m3	2,970	0.0	0	3,132,080	0.00	0	00-77
Backfilling	Class_C,1m＜W1＜4m_Borrow material	339	m3	20,940	0	0	7,098,738	0.00	0	00-76
Leveling	by Machine	231.9	m2	365	0	0	84,528	0.00	0	00-75
Crush stone base work	Crush stone,t=20cm	231.9	m2	2,604	0.0	0	603,847	0.00	0	01-33
Concrete work(1)	18N/mm2	23.2	m3	95,194	0	0	2,208,511	0.00	0	00-52
Form work	for level concrete	10.6	m2	448	0.0	0	4,750	0.00	0	01-24
Concrete work for Pier(2)_On land	Class D	421	m3	91,334.54	0.00	0.00	38,451,841	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	195.3	m2	8,784.71	0.00	0.00	1,715,654	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Arranging D16-D25	14.752	ton	114,348	0.0	81,271	1,686,855	0.00	1,198,910	00-80
Rebar work_SD345	Arranging D29-D32	10.468	ton	80,841	0.0	83,080	846,239	0.00	869,681	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0.0	0	0	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	14.752	nos	128,135	0.0	0	1,890,241	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	10.468	ton	78,633	0.0	0	823,128	0.00	0	00-84
Sheet pile driving	Nmax<50,Type III,shorter than 12m	317	nos	20,837	9.2	0	6,605,256	2,922.74	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	317	nos	11,788	5.4	0	3,736,844	1,695.95	0	00-92
Steel sheet pile	TypeIII	237.750	ton	927,504	0.0	0	220,514,076	0.00	0	Mat-163
Depreciation	70%	-0.7		220,514,076	0.0	0	(154,359,853)	0.00	0	
Subtotal		3	nos				136,812,715	4,619	2,068,591	
Per Unit Price		1	nos				45,604,238	1,540	689,530	

PKG1 - 23

Item: Pier_on Land Reference

Specification: Column_24N/mm2_PO1-3 3 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	142.8	m3	91,334.54	0.00	0.00	13,042,572.31	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	231.4	m2	8,784.71	0.00	0.00	2,032,781.89	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.000	ton	126,763.52	0.00	78,422.00	0.00	0.00	0	00-79
Rebar work_SD345	Arranging D16-D25	13.385	ton	114,347.57	0.00	81,271.00	1,530,542.22	0.00	1,087,812	00-80
Rebar work_SD345	Arranging D29-D32	11.177	ton	80,840.57	0.00	83,080.00	903,555.05	0.00	928,585	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,136.93	0.00	0.00	0.00	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	13.385	nos	128,134.58	0.00	0.00	1,715,081.35	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	11.177	ton	78,632.78	0.00	0.00	878,878.58	0.00	0	00-84
Miscellaneous work	Form work_Cylindrical type ϕ170	6	nos	137,517.42	0.00	0	825,104.52	0.00	0	00-85
Falsework	Scaffloding (Handrail precede type)	0	m2	17,531.81	0.00	0	0.00	0.00	0	00-86
Supporting	Wedge type	357.2	m3	17,796.09	0.00	0	6,356,763.35	0.00	0	02-237
Non-shrink Mortar		0.600	m3	2,565,045	0	0	1,539,027	0	0	02-229
Subtotal		3	nos				28,824,306		2,016,397	
Per Unit Price		1	nos				9,608,102	0	672,132	

PKG1 - 24

Item: Approach slab Reference

Specification: AO1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	9.40	m3	99,456.29	0.00	0.00	934,889.13	0.00	0	00-51
Rebar work_SD345	Arranging D13	0.091	ton	126,764	0.0	78,422	11,535.48	0.00	7,136	00-79
Rebar work_SD345	Arranging D16-D25	0.795	ton	114,348	0.0	81,271	90,906.32	0.00	64,610	00-80
Rebar work_SD345	Arranging D29-D32	0.873	ton	80,841	0.0	83,080	70,573.82	0.00	72,529	00-81
Rebar work_SD345	Assembling D13	0.091	ton	154,137	0.0	0	14,026.46	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	0.795	nos	128,135	0.0	0	101,866.99	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	0.873	ton	78,633	0.0	0	68,646.42	0.00	0	00-84
Form work	for ordinal concrete_with&without rebar	2.60	m2	8,784.71	0.00	0	22,840.25	(0.00)	0	01-22
Subtotal		1	LS				1,315,285		144,275	
Per Unit Price		1	LS				1,315,285	0	144,275	

PKG1 - 25

Item: Superstructure Reference

Specification: PC-I girder_Ramp_PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Post tension girder fabrication	PC-I girder_Ramp	8	nos	27,263,767	0	633,295	218,110,135	0	5,066,359	00-108
PC-I girdr erection	160t Truck crane	8	nos	498,064	0	0	3,984,508	0	0	00-109
PC pannel installation	PC-I girder_Ramp	1	LS	34,851,068	0	79,151	34,851,068	0	79,151	00-110
Cross beam work	PC-I girder_Ramp	1	LS	32,510,284	0	5,629,396	32,510,284	0	5,629,396	00-111
Slab work(Except for PC pannel)	PC-I girder_Ramp	1	set	39,202,893	0	4,141,972	39,202,893	0	4,141,972	00-112
Bearing_Set	PC-I girder_Ramp	14	nos	62,526	0	0	875,357	0	0	00-113
Bearing cost	for Ramp	1	LS	0	14,821	0	0	14,821	0	00-115
Expansion Joint setting	for Ramp	5.25	m	31,635	0	0	166,084	0	0	00-114
Expansion Joint cost	for Ramp	1	LS	0	0	433,755	0	0	433,755	00-122
Handrail Side	H = 1100	230.5	m	4,312	0	0	993,861	0	0	01-134
Barrier Fabrication	PC-I-girder_Ramp	1	LS	345,468	0	5,496,532	345,468	0	5,496,532	00-174
Deck treatment	Waterproof layer	603.9	m2	970	0	2,138	585,523	0	1,290,836	00-116
Drainage work	PC-I girder_Ramp	1	LS	2,787,268	0	322,602	2,787,268	0	322,602	00-117
Wheel Guard & Median Strip	Cast in site_PKG1_Ramp	1	LS	8,318,325	0	313,688	8,318,325	0	313,688	00-298
Leveling concrete		43.1	m3	95,194	0	0	4,102,881	0	0	00-52
Subtotal		1	LS				346,833,655	14,821	22,774,291	
Per Unit Price		1	LS				346,833,655	14,821	22,774,291	

PKG1 - 26

Item: Bridge Name Plate Installation Works Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bridge Name Plate Installation Works		1	nos	1,902,479.29	0.00	0.00	1,902,479	0	0	00-119
Subtotal		1	LS				1,902,479			
Per Unit Price		1	LS				1,902,479	0	0	

PKG1 - 27

Item: Approach road Reference

Specification: PKG1_Main 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Cutting&Dozing	by bulldozer for loose soil(sand)	12267.6	m3	1,347	0	0	16,523,230	0	0	00-18
Excavation&Loading	Loose sand_Backhoe･Full bucket0.6m3	15335	m3	1,154	0	0	17,703,527	0	0	00-4
Backfilling of A1	Class_C,1m＜W1＜4m_Borrow material	1368	m3	20,940	0	0	28,646,235	0	0	00-76
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	1285.1	m3	16,802	0	0	21,591,672	0	0	01-179
Cutting & Trimming slope	by machinery for loose soil(sand)	17	m2	2,584	0	0	43,920	0	0	00-37
Shaping slope of embankment	By machinery for Sand soil	2466.76	m2	2,479	0	0	6,115,172	0	0	00-19
Sodding	on slope	2466.76	m2	1,169	0	0	2,883,174	0	0	00-33
Subtotal		1	LS				93,506,930			
Per Unit Price		1	LS				93,506,930	0	0	

PKG1 - 28

Item: Soft Soil Treatment Reference

Specification: PKG1_Main road 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Deep mixing method	2 axis φ1200_22-30m	266	set	34,984	0	91,476	9,305,717	0	24,332,616	00-316
Deep mixing method	2 axis φ1200_15-18m	372	set	26,674	0	81,312	9,922,802	0	30,248,064	00-317
Deep mixing method			LS			178,766,880			0	Quatation
*as reference										
Cement material	Ordinal portland cement	11,081.00	t	84,600	0	0	937,452,600	0	0	Mat-53
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	13627	m3	16,802	0	0	228,954,722	0	0	01-179
Sand mat	Sand mat for preloading	2324	m3	18,451	0	0	42,880,868	0	0	01-180
Cement stabilization		3583	m3	4,574	0	0	16,386,851	0	0	00-15
Cement material	Ordinal portland cement	824	t	84,600			69,710,400			Mat-166
Subtotal		1	LS				1,314,613,960		54,580,680	
Per Unit Price		1	LS				1,314,613,960	0	54,580,680	

PKG1 - 29 163,956,561

Item: Mechanically Stabilized Earth Wall Reference H24MLIT P94

Specification: PKG1_Main road 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Mechanically Stabilized Earth Wall										
Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	283.38	m2	217,778	0	0	61,713,884	0	0	00-124
Reinforcement Material Installation W	Reinforced Retaining Wall (Type 1)	2562	m	167	0	1,233	428,008	0	3,158,946	00-125
Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	619.2	m3	2,233	0	0	1,382,568	0	0	00-126
Concret work_other material installati	Reinforced Retaining Wall (Type 1)	1	LS	19,977,538	0	1,129,136	19,977,538	0	1,129,136	00-127
Base concrete of Reinforced Retainin	Base concrete	1	LS	2,582,232	0	0	2,582,232	0	0	00-128
Installation of barrier, railing	0	101.7	m	4,312	0	0	438,506	0	0	01-134
Barrier Fabrication	on Mechanically Stabilized Earth Wall	1	LS	152,113	0	2,420,179	152,113	0	2,420,179	00-180
Subtotal		1	LS				86,674,849		6,708,261	
Per Unit Price		1	LS				86,674,849	0	6,708,261	

PKG1 - 30

Item: Accessory_Approach road Reference

Specification: for Approach road_PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guard-pipe installation	Metal type(GP-A)	90	m	3,098	0	20,000	278,843	0	1,800,000	00-147
Guard-rail installation	Metal type(GR-A)	533.385	m	3,098	0	30,000	1,652,560	0	16,001,550	00-129
Guard-rail installation	Metal type(GR-B)	851.81	m	3,098	0	26,457	2,639,120	0	22,536,337	00-130
Concrete Kerb Type A-1		937	lm	7,000			6,559,000			00-339
Concrete Kerb Type A-2		1.7	Nos.	7,000			11,667			
Concrete Kerb Type A-3		3.8	lm	7,000			26,600			
Concrete Kerb Type B-1		91	lm	6,500			591,500			00-340
Concrete Kerb Type B-2		5.0	Nos.	6,500			32,500			
Concrete Kerb Type B-3		11.8	lm	6,500			76,700			
Concrete Kerb Type D		30	lm	6,000			180,000			00-341
Median Type C		179	lm	7,000			1,253,000			
unbroken ,white W=8cm		328.8	m	1,800			591,840			00-343
unbroken ,white W=10cm		5960.623	m	1,980			11,802,034			00-343
unbroken ,white W=15cm		1983.2	m	2,323			4,606,974			00-342
unbroken ,white W=30cm		31	m	5,500			170,500			00-344
unbroken ,white W=45cm		230	m	6,852			1,575,960			00-345
broken ,white W=8cm		117.6	m	2,009			236,258			00-346
broken ,white W=10cm		2270.06	m	2,009			4,560,551			00-346
Speed Limit Marks		1	each	3,903			3,903			
Arrow Mark ,white		25	each	3,903			97,575			00-347
Regulatory Signs		12	nos							
Warning Signs		10	nos							
Informatory Signboards-TypeC		2	nos							
Ligjtning Foundation	Cast in site_PKG1_Approach_Main Road	1	LS	224,035	0	9,411	224,035	0	9,411	00-336
Ligjtning Foundation	Cast in site_PKG1_Approach_Ramp	1	LS	74,678	0	3,137	74,678	0	3,137	00-337
Subtotal		1	LS				37,245,797		40,350,435	
Per Unit Price		1	LS				37,245,797	0	40,350,435	

PKG1 - 31

Item: Approach road Reference

Specification: PKG1_Ramp 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Cutting&Dozing	by bulldozer for loose soil(sand)	1056	m3	1,347	0	0	1,422,326	0	0	00-18
Excavation&Loading	Loose sand_Backhoe･Full bucket0.6m3	1320	m3	1,154	0	0	1,523,927	0	0	00-4
Backfilling of A1	Class_C,1m＜W1＜4m_Borrow material	879	m3	20,940	0	0	18,406,462	0	0	00-76
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	1071.5	m3	16,802	0	0	18,002,861	0	0	01-179
Cutting & Trimming slope	by machinery for loose soil(sand)		m2	2,584	0	0	0	0	0	00-37
Shaping slope of embankment	By machinery for Sand soil	661	m2	2,479	0	0	1,638,639	0	0	00-19
Sodding	on slope	661	m2	1,169	0	0	772,583	0	0	00-33
Subtotal		1	LS				41,766,798			
Per Unit Price		1	LS				41,766,798	0	0	

PKG1 - 32

Item: Soft Soil Treatment Reference

Specification: PKG1_Ramp 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Deep mixing method	2 axis φ1200_22-30m	247	set	34,984	0	91,476	8,641,023	0	22,594,572	00-316
Deep mixing method			LS			86,919,300			0	Quatation
*as reference										
Soil Cement Colmuns	(Preliminary Test Colums; Non-working Pile) inclu	1	LS	0.00	0.00	11,000,000	0.00	0.00	11,000,000	Quatation
Cement material	Ordinal portland cement	5,895.00	t	84,600	0	0	498,717,000	0	0	Mat-53
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material		m3	16,801.55	0.00	0.00	0.00	0.00	0	01-179
Sand mat	Sand mat for preloading		m3	18,451.32	0.00	0.00	0.00	0.00	0	01-180
Cement stabilization		1286	m3	4,574	0.00	0.00	5,881,521	0.00	0	00-15
Cement material	Ordinal portland cement	296	t	84,600			25,041,600			Mat-166
Subtotal		1	LS				538,281,144		33,594,572	
Per Unit Price		1	LS				538,281,144	0	33,594,572	

PKG1 - 33

Item: Mechanically Stabilized Earth Wall Reference H24国土 P94

Specification: PKG1_Ramp 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Mechanically Stabilized Earth Wall										
Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	176.08	m2	217,778	0	0	38,346,322	0	0	00-124
Reinforcement Material Installation W	Reinforced Retaining Wall (Type 1)	1664	m	167	0	1,233	277,988	0	2,051,712	00-125
Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	310.69	m3	2,233	0	0	693,718	0	0	00-126
Concret work_other material installati	Reinforced Retaining Wall (Type 1)_Ramp	1	LS	7,261,050	0	763,230	7,261,050	0	763,230	00-269
Base concrete of Reinforced Retainin	Base concrete_Ramp	1	LS	1,025,557	0	0	1,025,557	0	0	00-270
Installation of barrier, railing	0	38.975	m	4,312	0	0	168,051	0	0	01-134
Barrier Fabrication	on Mechanically Stabilized Earth Wall_Ramp	1	LS	109,532	0	1,742,699	109,532	0	1,742,699	00-271
Subtotal		1	LS				47,882,218		4,557,641	
Per Unit Price		1	LS				47,882,218	0	4,557,641	

PKG1 - 35

Item: Drainage work_approach road Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
U-Ditch_with_cover	B/H=0.8/1.0m	16	m	186,737	0	2,219	2,987,784	0	35,509	00-237
U-Ditch_with_cover	B/H=0.8/0.8m	84.9	m	166,620	0	3,129	14,146,066	0	265,652	00-238
U-Ditch_with_cover	B/H=0.5/0.85m	330.9	m	155,575	0	2,674	51,479,830	0	884,893	00-239
U-Ditch_without_cover	B/H=1.0/1.0m	187.425	m	174,624	0	2,831	32,728,821	0	530,600	00-242
U-Ditch_without_cover	B/H=0.8/0.8m	1227	m	139,425	0	2,133	171,074,266	0	2,617,314	00-243
U-Ditch_without_cover	B/H=0.5/0.5m	181	m	94,645	0	1,545	17,130,707	0	279,627	00-244
U-Ditch_without_cover	B/H=0.3/0.3m	78.78	m	50,923	0	0	4,011,697	0	0	00-272
Catch Pit	B/L=1.2/1.2m,H=1.6m	12	nos	814,506	0	9,254	9,774,066	0	111,048	00-245
Catch Pit	B/L=1.0/1.0m,H=1.35m	14	nos	613,844	0	6,901	8,593,819	0	96,614	00-246
Catch Pit	B/L=0.7/0.7m,H=2.25m	1	nos	1,207,406	0	9,097	1,207,406	0	9,097	00-247
Catch Pit	B/L=0.7/0.7m,H=1.85m	3	nos	944,186	0	7,764	2,832,557	0	23,292	00-248
Catch Pit	B/L=0.7/0.7m,H=1.05m	3	nos	346,220	0	3,764	1,038,659	0	11,292	00-249
Catch Pit	B/L=0.5/0.5m,H=0.7m	3	nos	94,026	0	0	282,079	0	0	00-252
Catch Pit	B/L=0.6/0.4m,H=0.5m	5	nos	174,374	0	0	871,870	0	0	00-253
Pipe culvert	φ0.3m,360° concreted_B	70	m	58,156	0	1,145	4,070,904	0	80,150	00-255
Pipe culvert	φ0.9m,360° concreted	44.63	m	434,129	0	5,850	19,375,186	0	261,099	00-139
Box Culvert fabrication	1000*1000	20.7	m	247,447	0	9,564	5,122,156	0	197,975	01-261
Vertical Drain	TypeA_PKG1	1	LS	607,739	0	0	607,739	0	0	00-259
Setting of Flap Gate	1000*1000	2.00	set	872,286	0	5,392,800	1,744,573	0	10,785,600	01-263
Outlet_TypeA_Left	PKG1	1.00	LS	6,318,892	0	167,365	6,318,892	0	167,365	00-256
Outlet_TypeA_Right	PKG1	1.00	LS	6,295,419	0	167,365	6,295,419	0	167,365	00-324
Vertical drain typeC	PVCφ150		m	31,641	0	0	0	0	0	Mat-29
Subtotal		1	LS				361,694,496		16,524,492	
Per Unit Price		1	LS				361,694,496	0	16,524,492	

PKG1 - 36

Item: Pavement on bridge surface Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement	on Steel deck	8028	m2	62,136	0	11,888	498,828,450	0	95,434,295	00-334
Pavement	on Concrete deck	5095	m2	18,541	0	2,138	94,464,408	0	10,890,563	00-335
Pavement	on Steel deck	8028		61,298		11,870	492,100,962		95,292,360	Quatation
Pavement	on Concrete deck	5095		47,800			243,541,000			Quatation
*as reference										
not into cal.										
Subtotal		1	LS				593,292,858		106,324,858	
Per Unit Price		1	LS				593,292,858	0	106,324,858	

PKG1 - 37

Item: Pavement_Approach_road_main Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	9104	m2	597	0	0	5,431,264	0	0	00-5
Road base	Subbase courset=500mm	4806	m2	10,005	0	0	48,083,261	0	0	00-266
Road base	Subbase courset=350mm	4298	m2	6,905	0	0	29,679,194	0	0	00-265
Road base	Base course t=250mm	8670	m2	7,814	0	0	67,743,565	0	0	00-262
Pavement	Binder course t=50mm W>=3m, including prime coat	8457	m2	11,383	0	0	96,263,917	0	0	00-9
Pavement	Surface course t=50mmW>=3.0m, including tack coat	8250	m2	10,909	0	0	89,998,838	0	0	00-8
Subtotal		1	LS				337,200,039			
Per Unit Price		1	LS				337,200,039	0	0	

PKG1 - 38

Item: Pavement_Approach_road_access Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Yangon access line										
Pavement_Levelling	Roadbed & subgrade	984	m2	597	0	0	587,035	0	0	00-5
Pavement	Subbase courset=150mm	984	m2	3,099	0	0	3,049,898	0	0	00-7
Pavement	Base course t=150mm	939	m2	4,492	0	0	4,218,054	0	0	00-6
Pavement	Binder course t=50mm W>=3m, including prime coat	908	m2	11,383	0	0	10,335,537	0	0	00-9
Pavement	Surface course t=50mmW>=3.0m, including tack coat	908	m2	10,909	0	0	9,905,327	0	0	00-8
Thilawa access line										
Pavement_Levelling	Roadbed & subgrade	1125	m2	597	0	0	671,153	0	0	00-5
Pavement	Subbase courset=150mm	1125	m2	3,099	0	0	3,486,926	0	0	00-7
Pavement	Base course t=150mm	1077	m2	4,492	0	0	4,837,959	0	0	00-6
Pavement	Binder course t=50mm W>=3m, including prime coat	1045.6	m2	11,383	0	0	11,901,803	0	0	00-9
Pavement	Surface course t=50mmW>=3.0m, including tack coat	1046	m2	10,909	0	0	11,410,762	0	0	00-8
Subtotal		1	LS				60,404,453			
Per Unit Price		1	LS				60,404,453	0	0	

PKG1 - 39

Item: Pavement_Rigid_Approach_road_Starcity access Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Sand compacted	t=200mm	613.1	m2	10,034	0	0	6,151,612	0	0	00-268
Hard core with sand	t=500mm	613.1	m2	11,014	0	0	6,752,659	0	0	00-267
Plastic sheet		613.1	m2	0	0	324	0	0	198,644	Mat-446
Concrete work(1)	18N/mm2	49.048	m3	95,194	0	0	4,669,097	0.00	0	00-52
Form work	for ordinal concrete_with&without rebar		m2	8,784.71	0.00	0.00	0.00	0.00	0	01-22
Concrete work	24N/mm2	122.62	m3	99,456.29	0.00	0.00	12,195,330.28	0.00	0	00-51
Form work	for ordinal concrete_with&without rebar		m2	8,784.71	0.00	0.00	0.00	0.00	0	01-22
Rebar net	Φ6 / 150x150mm	613.1	m2	0	0	239	0	0	146,224	Mat-447
TRANSVERSE JOINT φ28	PLAIN DOWEL BAR	1.079	t	0	0	76,500	0	0	82,544	Mat-448
LONGITUDINAL JOINT										
Rebar work_SD345	Arranging D16-D25	1.084	ton	114,348	0	81,271	123,953	0	88,098	00-80
Rebar work_SD345	Assembling D16-D25	1.084	nos	128,135	0	0	138,898	0	0	00-83
Foreman	0.7 person / 100 m2 *2.5	4.3	person	21,870			93,859			
Skilled Labour	2.16 person / 100 m2 *2.5	13.2	person	14,580			193,082			
Unskilled Labour	4.87 person / 100 m2 *2.5	29.9	person	12,150			362,774			
Concrete finisher	5-8.5m	7.41851	hr	6,158		2,273	45,681		16,861	OPE-78
Concrete leveler	5-8.5m	7.41851	hr	3,688		1,246	27,360		9,246	OPE-77
Rough terrain crane	25t hang	0.73572	day	232,008	0		170,693	0		OPE-27
Subtotal		1	LS				30,925,000		541,617	
Per Unit Price		1	LS				30,925,000	0	541,617	

PKG1 - 40

Item: Pavement_Side walk_Approach_road Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Star Sity Access Pavement(Side Walk)		46.4	m2	120,000			5,568,000			
Sand Compacted	t=300mm	102.4	m2							
Hard Core with compacted sand	t=200mm	46.4	m2							
Expose Aggregate Finished Foot	t=75mm	46.4	m2							
Side Walk Pavement			m2	240,000			0			
Soil Aggregate:C-30	t=100mm									
Sand	t=30mm									
Precast Concrete Paving Block	t=60mm									
Subtotal		1	LS				5,568,000			
Per Unit Price		1	LS				5,568,000	0	0	

PKG1 - 41

Item: Pavement_Approach_road_Ramp Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	2638	m2	597	0	0	1,573,778	0	0	00-5
Pavement	Subbase courset=150mm	2638	m2	3,099	0	0	8,176,455	0	0	00-7
Pavement	Base course t=150mm	2578	m2	4,492	0	0	11,580,556	0	0	00-6
Pavement	Binder course t=50mm W>=3m, including prime coat	2398	m2	11,383	0	0	27,295,835	0	0	00-9
Pavement	Surface course t=50mmW>=3.0m, including tack coat	2435	m2	10,909	0	0	26,563,293	0	0	00-8
Subtotal		1	LS				75,189,917			
Per Unit Price		1	LS				75,189,917	0	0	

PKG1 - 42

Item: Electrical work Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Lightning work	PKG1	1	LS	0	0	102,178,440	0	0	102,178,440	00-307
Traffic signal work	PKG1	1	LS	0	0	11,220,686	0	0	11,220,686	00-308
Power supply equipment	PKG1	1	LS	0	0	16,329,619	0	0	16,329,619	00-309
Illumination for tower	PKG1	1	LS	0	0	8,005,635	0	0	8,005,635	00-310
Obstacle light	PKG1	1	LS	0	0	4,542,453	0	0	4,542,453	00-311
Navigation sign & light	PKG1	1	LS	0	0	17,759,561	0	0	17,759,561	00-312
Lightning conductor	PKG1	1	LS	0	0	426,330	0	0	426,330	00-313
Subtotal		1	LS						160,462,724	
Per Unit Price		1	LS				0	0	160,462,724	

PKG1 - 51

Item: Monitoring Equipment Reference

Specification: PKG1_2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Monitoring Equipment	Equipment cost	1	LS	0	0	4,971,100	0	0	4,971,100	00-326
Monitoring Equipment	Setting cost	1	LS	0	0	630,000	0	0	630,000	00-327
Subtotal		1	LS						5,601,100	
Per Unit Price		1	LS				0	0	5,601,100	

PKG1 - 52

Item: Foundation_SPSP(P7) Reference

Specification: 3 spans Steel box girder const. from barge(Design change) 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide(Design change)	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	28	nos	302,319	668	36,092	8,464,943	18,716.3	1,010,584	00-339
Guide(Design change)	Guide(Frame)Falswork_Install	15	t	77,660	1,924	19,736	1,164,899	28,863.0	296,033	00-340
Steel Pipe Sheet Pile Driving(Design c	Steel Box(350 t CC & 275 t CC)	1	LS	222,417,413	928,403	0	222,417,413	928,402.8	0	00-341
Material cost_P7(Design change)	Steel Pipe Sheet Pile	1	LS	0	946,921	0	0	946,921.2	0	00-342
Excavation inside of the pipe pile		354	m3	91,385	0.0	0	32,350,286	0.0	0	00-61
Concrete Filling to Steel Pipe		301.1	m3	116,062	0.0	0	34,946,157	0.0	0	00-62
Cleaning of Inside joint pipe		1800.5	m	7,453	1.4	0	13,419,271	2,556.7	0	00-63
Mortar filling of Inside joint pipe		1813.4	m	3,457	0.0	103	6,269,613	0.0	186,798	00-64
Sealing of Inside joint pipe	P-P_type	348.5	m	1,854	0.0	621	646,269	0.0	216,324	00-65
Excavation inside of the well		807.4	m3	22,464	6.5	0	18,137,296	5,248.1	0	00-66
Spread sand		52.3	m3	53,032	10.0	0	2,773,552	522.5	0	00-67
Bottom slab concrete		228	m3	138,022	0.0	0	31,468,945	0.0	0	00-68
Falswork Install / Remove	Install65%_Remove35%	68.2	t	771,851	0.0	20,125	52,640,223	0.0	1,372,539	00-69
Concrete filling to space between steel pipe well and wale		19.8	m3	671,092	0.0	0	13,287,620	0.0	0	00-70
Welding of the dowel	Stud welding_1,000mm 1 row 4nos	253	nos	7,286	0.0	2,994	1,846,445	0.0	758,794	00-71
Welding of the dowel	Stud welding_700mm 1 row 4nos	515	nos	7,286	0.0	2,819	3,748,842	0.0	1,450,622	00-72
Steel pipe sheet pile Cut&Removal		36	nos	342,320	15.0	0	12,323,506	539.6	0	00-73
Subtotal		1	nos				455,905,280	1,931,770	5,291,694	
Per Unit Price		1	nos				455,905,280	1,931,770	5,291,694	

PKG1 - 53

Item: Foundation_SPSP(P6) Reference

Specification: 3 spans Steel box girder const. from Jetty(Design change) 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide_(Design change)	Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty_P6	32	nos	203,686	55	65,902	6,517,947	1,763.2	2,108,851	00-343
Guide_(Design change)	Guide(Frame)Falswork_Install_from Jetty_P6	10.4	t	320,266	0	19,736	3,330,769	0.0	205,249	00-344
Steel Pipe Sheet Pile Driving_(Design	from Jetty_P6	1	LS	209,243,312	99,124	0	209,243,312	99,123.9	0	00-345
Material cost_from Jetty_P6(Design c	Steel Pipe Sheet Pile	1	LS	0	851,262	0	0	851,262.1	0	00-346
Excavation inside of the pipe pile		374.1	m3	91,385	0.0	0	34,187,125	0.0	0	00-61
Concrete Filling to Steel Pipe		319.9	m3	116,062	0.0	0	37,128,115	0.0	0	00-62
Cleaning of Inside joint pipe		1738.7	m	7,453	1.4	0	12,958,670	2,469.0	0	00-63
Mortar filling of Inside joint pipe		1679.9	m	3,457	0.0	103	5,808,053	0.0	173,046	00-64
Sealing of Inside joint pipe	P-P_type	271.7	m	1,854	0.0	621	503,849	0.0	168,652	00-65
Excavation inside of the well		993.2	m3	22,464	6.5	0	22,311,076	6,455.8	0	00-66
Spread sand		60.4	m3	53,032	10.0	0	3,203,108	603.4	0	00-67
Bottom slab concrete		263.1	m3	138,022	0.0	0	36,313,507	0.0	0	00-68
Falswork Install / Remove	Install65%_Remove35%	49.9	t	771,851	0.0	20,125	38,515,353	0.0	1,004,247	00-69
Concrete filling to space between steel pipe well and wale		17.4	m3	671,092	0.0	0	11,676,999	0.0	0	00-70
Welding of the dowel	Stud welding_1,000mm 1 row 4nos	292	nos	7,286	0.0	2,994	2,125,335	0.0	873,404	00-71
Welding of the dowel	Stud welding_700mm 1 row 4nos	456	nos	7,286	0.0	2,819	3,324,242	0.0	1,286,322	00-72
Steel pipe sheet pile Cut&Removal		34	nos	342,320	15.0	0	11,638,867	509.7	0	00-73
Subtotal		1	nos				438,786,327	962,187	5,819,771	
Per Unit Price		1	nos				438,786,327	962,187.1	5,819,771	

PKG1 - 54

Item: Pier_on River Reference

Specification: Pile cap(Design change) 2 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile cap										
Pile cap_on River	Class D	924.6	m3	105,754	0	0	97,780,213.12	0.00	0	00-50
Rebar work_SD345	Arranging D13	0.168	ton	126,764	0.0	78,422	21,296.27	0.00	13,175	00-79
Rebar work_SD345	Arranging D16-D25	12.025	ton	114,348	0.0	81,271	1,375,029.53	0.00	977,284	00-80
Rebar work_SD345	Arranging D29-D32	28.885	ton	80,841	0.0	83,080	2,335,079.86	0.00	2,399,766	00-81
Rebar work_SD345	Assembling D13	0.168	ton	154,137	0.0	0	25,895.00	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	12.025	ton	128,135	0.0	0	1,540,818.32	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	28.885	ton	78,633	0.0	0	2,271,307.85	0.00	0	00-84
Rebar work_SD345	Arranging D38	17.76	ton	126,764	0	81,271	2,251,320.12	0.00	1,443,373	00-226
Rebar work_SD345	Arranging D51		ton	126,764	0	83,080	0.00	0.00	0	00-228
Rebar work_SD345	Assembling D38	17.76	ton	154,137	0	0	2,737,471.88	0.00	0	00-230
Rebar work_SD345	Assembling D51	0	ton	154,137	0	0	0.00	0.00	0	00-232
Mechanical joint	D35, deformed bar		nos	0	0	2,493	0.00	0.00	0	Mat-292
Mechanical joint	D38, deformed bar	82	nos	0	0	3,006	0.00	0.00	246,492	Mat-293
Mechanical joint	D51, deformed bar		nos	0	0	5,832	0.00	0.00	0	Mat-295
Crawler crane	50～55t hang	63.00	day	297,147.20	0.00		18,720,273.60	(0.00)		OPE-26
Barge	800t	63.00	day	1,388,221.15	0.00	0	87,457,932.69	(0.00)	0	Mac-d(20)
*3.5 months of pile cap schedule										
estimated about 60 % is for Rebar work										
= 3.5 months * 0.6 = 2.1 month	2.1 months * 30 days = 63 days									
Rebar work_SD345	Arranging D35		ton	126,764	0	80,321	0.00	0.00	0	00-225
Rebar work_SD345	Assembling D35	0	ton	154,137	0	0	0.00	0.00	0	00-229
Subtotal		2	nos				216,516,638		5,080,090	
Per Unit Price		1	nos				108,258,319	0	2,540,045	

PKG1 - 55

Item: Pier_on River Reference

Specification: Column_30N/mm2(Design change) 2 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pier										
Concrete work for Pier(2)_On river	Class C I	1572.4	m3	111,351	0	0	175,088,218	0	0	00-89
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0	78,422	0	0	0	00-79
Rebar work_SD345	Arranging D16-D25	97.473	ton	114,348	0	81,271	11,145,801	0	7,921,728	00-80
Rebar work_SD345	Arranging D29-D32	56.141	ton	80,841	0	83,080	4,538,470	0	4,664,194	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0	0	0	0	0	00-82
Rebar work_SD345	Assembling D16-D25	97.473	ton	128,135	0	0	12,489,662	0	0	00-83
Rebar work_SD345	Assembling D29-D32	56.141	ton	78,633	0	0	4,414,523	0	0	00-84
Rebar work_SD345	Arranging D38	59.792	ton	126,764	0	81,271	7,579,444	0	4,859,356	00-226
Rebar work_SD345	Arranging D51		ton	126,764	0	83,080	0	0	0	00-228
Rebar work_SD345	Assembling D38	59.792	ton	154,137	0	0	9,216,155	0	0	00-230
Rebar work_SD345	Assembling D51	0	ton	154,137	0	0	0	0	0	00-232
Mechanical joint	D32, deformed bar	422	nos	0	0	1,818	0	0	767,196	Mat-294
Mechanical joint	D38, deformed bar	342	nos	0	0	3,006	0	0	1,028,052	Mat-293
Crawler crane	50～55t hang	90.00	day	297,147.20	0.00		26,743,248.00	(0.00)		OPE-26
Barge	800t	90.00	day	1,388,221.15	0.00	0	124,939,903.85	(0.00)	0	Mac-d(20)
*5 months of pier schedule, about 60% is for rebar work_ 5 months*0.6*30days										
Non-shrink Mortar		4.743	m3	2,565,045	0	0	12,166,008	0	0	02-229
Form work	Ordinal type	910.6	m2	13,806	0	0	12,572,153	0	0	00-156
Form work	Plywood curved panel	341.6	m2	17,762	0	0	6,067,363	0	0	00-157
Scaffolding	Hand rail precede type	1691	m2	9,747	0	289	16,481,484	0	488,073	00-158
Supporting	Wedge type	186	m3	17,796	0	0	3,310,073	0	0	02-237
Bracket support_PKG1(Design change	Pierhead_coping	1	LS	194,493,937	0	0	194,493,937	0	0	00-347
Installation of barrier, railing		186.6	m	4,312	0	0	804,574	0	0	01-134
Subtotal		2	nos				622,051,018		19,728,599	
Per Unit Price		1	nos				311,025,509	0	9,864,300	

PKG1 - 56

Item: Superstructure Reference

Specification: 3 spans Steel box girder (Design change) 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks	
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)		
Fabrication of steel girder		1	L.S.			1,396,351,758			1,396,351,758	Quatation	
Erection of girder(P5-6)	3 spans Steel box girder (Design change)	1	L.S.	237,119,766	0	4,560,880	237,119,766	0	4,560,880	00-349	
Erection of main girder(P6-7,7-8)	3 spans Steel box girder (Design change)	1	L.S.	592,342,808	235,052	122,993,209	592,342,808	235,052	122,993,209	00-350	
Dead-bolting including temporary ere	3 spans Steel box girder (Design change)	244,308	nos	286	0	47	69,828,113	0	11,580,199	01-281	
Painting in site	3 spans Steel box girder (Design change)	1	LS	67,778,093	0	17,059,794	67,778,093	0	17,059,794	00-351	
Bearing setting	3 spans Steel box girder (Design change)	1	LS	15,269,352	1,103,110	0	15,269,352	1,103,110	0	00-352	
Expaansion Joint setting	3 spans Steel box girder (Design change)	1	LS	3,969,601	0	33,483,992	3,969,601	0	33,483,992	00-353	
Wheel Guard & Median Strip	Cast in site for 3 spans Steel box girder (Design change)	1	LS	38,096,154	0	1,781,320	38,096,154	0	1,781,320	00-354	
Installation of barrier, railing	0	1,190	m	4,312	0	0	5,132,673	0	0	01-134	
Barrier fabrication	3 spans Steel box girder (Design change)	1,190	m	0	0	22,647	0	0	26,958,806	01-303	
Drainage work	For Any	58	nos	13,704	0	53,767	794,752	0	3,118,127	00-106	
Transportation in site	Special trailer 60 t	2.00	month	13,594,952	0	0	27,189,904	0	0	01-213	share00-170
Temporary placing	by 70 t CC	136	block	38,912	0	0	5,291,986	0	0	01-105	
Transportation in site(Segment&Con.	by Carriage (carriage length: below 200m)	68	nos	294,178	0	0	20,004,105	0	0	01-107	
Loading on barge	by 200 t CC and 200 t TC	68	Time	319,983	0	0	21,758,810	0	0	01-108	
Facilities and Concrete Base for Reas	(Package-1)	0.3	LS	37,321,151	0	31,491,600	11,200,000	0	9,447,000	00-179	share_PKG1-17
Accessory&Miscellaneous work	3 spans Steel box girder (Design change)	1	LS	0	0	4,720,692	0	0	4,720,692	00-355	
Subtotal		1	LS				1,115,776,117	1,338,162	1,632,055,777		
Per Unit Price		1	LS				1,115,776,117	1,338,162	1,632,055,777		

PKG1 - 57

Item: Pavement on bridge surface Reference

Specification: 3 spans Steel box girder (Design change) 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement	on Steel deck	5,185	m2	62,136	0	11,888	322,163,148	0	61,635,243	00-334
Subtotal		1	LS				322,163,148		61,635,243	
Per Unit Price		1	LS				322,163,148	0	61,635,243	

PKG1 - 58

Item: Inspection Ladder Reference

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication	Inspection Ladder for P5, 20	1	LS	58,065	0	518,142	58,065	0	518,142	00-356
Fabrication	Inspection Ladder for P10, 13	1	LS	63,738	0	498,983	63,738	0	498,983	00-357
Installation	Inspection Ladder	2	set	879,086	0	0	1,758,171	0	0	00-358
Subtotal		1	LS				121,803		1,017,125	
Per Unit Price		1	LS				121,803	0	1,017,125	

Package2 List(1/1)

No.	Item	Specification	Unit	Unit Price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	JPY_Conv.		Local (MMK)	Foreign (USD)	Main (JPY)	JPY_Conv.
PKG2-1	Temporary Road	PKG2	LS	384,650,543	0.0	0	32,002,000	1.0	384,650,543	0.0	0	32,002,925
PKG2-2	Diversion Road	PKG2	LS	41,599,433	0.0	0	3,461,000	1.0	41,599,433	0.0	0	3,461,072
PKG2-3	Temporary_Jetty	Jetty Thateta	LS	666,647,989	0.0	159,572,654	215,037,000	1.0	666,647,989	0.0	159,572,654	215,037,766
PKG2-4	Temporary_Jetty	for Concrete transportation	LS	109,621,878	0	4,376,875	13,497,000	1.0	109,621,878	0.0	4,376,875	13,497,415
PKG2-5	Reclamation of construction & stockyard	PKG2	LS	1,071,984,253	14,266	0	90,802,000	1.0	1,071,984,253	14,266.2	0	90,802,734
PKG2-6							0	1.0	0	0.0	0	0
PKG2-7	Foundation_cast in bored pile_RCD	PKG2	LS	1,041,787,607	56,839	34,473,810	127,579,000	1.0	1,041,787,607	56,839.2	34,473,810	127,579,623
PKG2-8	Abutment_2	Pile cap	nos	97,028,954	2,593	1,721,499	10,087,000	1.0	97,028,954	2,593.5	1,721,499	10,087,654
PKG2-9	Abutment_2	Wall, Parapet, Wing wall	nos	33,496,468	0	1,820,873	4,607,000	1.0	33,496,468	0.0	1,820,873	4,607,779
PKG2-10	Pier_on Land	Pile cap_Concrete 24N/mm2_Pier23,24,25	nos	145,108,226	3,936	4,409,714	16,927,000	3.0	435,324,678	11,808.3	13,229,143	50,783,793
PKG2-11	Pier_on Land	Column_24N/mm2_P24-25	nos	26,934,725	0	990,711	3,231,000	2.0	53,869,451	0.0	1,981,422	6,463,360
PKG2-12	Pier_on Land	Column_30N/mm2_P23	nos	75,450,900	0	5,517,083	11,794,000	1.0	75,450,900	0.0	5,517,083	11,794,597
PKG2-13	Foundation_SPSP(P21_22)	Construction Method (from Jetty)	nos	474,368,846	814,833	13,570,805	145,204,000	2.0	948,737,693	1,629,666.7	27,141,610	290,408,190
PKG2-14	Foundation_SPSP(P14_15_16_17_18_19_20)	Construction Method (on barge)	nos	920,727,756	878,944	12,903,965	188,925,000	7.0	6,445,094,293	6,152,607.1	90,327,752	1,322,480,985
PKG2-15	Pier_on River_PKG2	Pile cap	nos	95,216,969	0	4,194,083	12,116,000	9.0	856,952,718	0.0	37,746,743	109,045,209
PKG2-16	Pier_on River_PKG2	Column_30N/mm2	nos	292,762,308	0	12,569,180	36,927,000	9.0	2,634,860,776	0.0	113,122,618	332,343,034
PKG2-17	Approach slab	A2	nos	4,394,018	0	485,872	851,000	1.0	4,394,018	0.0	485,872	851,454
PKG2-18	Approach slab	AF1	nos	2,512,292	0	221,176	430,000	1.0	2,512,292	0.0	221,176	430,198
PKG2-19	Superstructure	Steel box girder bridge	LS	3,595,221,052	1,513,126	3,996,079,298	4,466,351,000	1.0	3,595,221,052	1,513,126.0	3,996,079,298	4,466,351,371
PKG2-20	Superstructure	PC box girder_SBS_PKG2	LS	2,745,466,075	2,347,160	390,943,627	884,853,000	1.0	2,745,466,075	2,347,159.6	390,943,627	884,853,631
PKG2-21	Bridge Name Plate Installation Works	PKG2	LS	3,262,464			271,000	1.0	3,262,464	0.0	0	271,437
PKG2-22	Approach road	PKG2	LS	836,673,470	0	0	69,611,000	1.0	836,673,470	0.0	0	69,611,232
PKG2-23	Soft Soil Treatment	PKG2_Main road	LS	3,882,186,353	0	112,256,019	435,253,000	1.0	3,882,186,353	0.0	112,256,019	435,253,923
PKG2-24	Mechanically Stabilized Earth Wall	PKG2_Main road	LS	341,494,098	0	16,838,581	45,250,000	1.0	341,494,098	0.0	16,838,581	45,250,889
							0	1.0	0	0.0	0	0
PKG2-26	Drainage work_approach road	PKG2	LS	697,190,988	0	25,447,112	83,453,000	1.0	697,190,988	0.0	25,447,112	83,453,402
PKG2-27	Pavement on bridge surface	PKG2	LS	966,303,365	0	177,270,808	257,667,000	1.0	966,303,365	0.0	177,270,808	257,667,247
PKG2-28	Pavement_Approach_road_main	PKG2	LS	424,251,752	0	0	35,297,000	1.0	424,251,752	0.0	0	35,297,745
PKG2-29	Pavement_Rigid_Approach_road	PKG2	LS	146,390,494	0	4,037,980	16,217,000	1.0	146,390,494	0.0	4,037,980	16,217,669
PKG2-30	Electrical work	PKG2	LS	0	0	113,632,501	113,632,000	1.0	0	0.0	113,632,501	113,632,501
PKG2-31	Retaning Wall (L Shape Type)	PKG2	LS	50,292,130	0	6,201,612	10,385,000	1.0	50,292,130	0.0	6,201,612	10,385,917
PKG2-32	Toll Plaza	Toll Plaza Facility	LS	0	0	192,715,243	192,715,000	1.0	0	0.0	192,715,243	192,715,243
PKG2-33	Toll Plaza	Administrative Office_PKG2	LS	0	0	58,546,511	58,546,000	1.0	0	0.0	58,546,511	58,546,511
PKG2-34	Accessory_Approach road	for Approach road_PKG2	LS	73,524,362	0	19,051,155	25,168,000	1.0	73,524,362	0.0	19,051,155	25,168,381
PKG2-35	Inspection Ladder	PKG2	LS	121,803	0	1,017,125	1,027,000	1.0	121,803	0.0	1,017,125	1,027,259
Total									28,666,392,349	11,728,066.6	5,605,776,702	9,317,382,146

PKG2 - 1

Item: Temporary Road Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary road	Type A	2375	m2	27,380	0	0	65,028,331	0	0	00-191
Temporary road	Type B	2718	m2	30,480	0	0	82,844,205	0	0	00-6
Temporary road	Type C	4792	m2	43,245	0	0	207,231,238	0	0	00-7
Cement stabilization		3062	m3	4,574	0	0	14,004,057	0	0	00-15
Cement material	Flexible container bag	183.72	ton	84,600			15,542,712			Mat-166
Subtotal		1	LS				384,650,543			
Per Unit Price		1	LS				384,650,543	0	0	

PKG2 - 2

Item: Diversion Road Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Diversion road	Section-1	260	m2	62,275	0	0	16,191,396	0	0	00-197
Diversion road	Section-2		m2	102,686	0	0	0	0	0	00-198
Diversion road	Section-3	408	m2	62,275	0	0	25,408,037	0	0	00-199
Subtotal		1	LS				41,599,433			
Per Unit Price		1	LS				41,599,433	0	0	

PKG2 - 3

Item: Temporary_Jetty Reference

Specification: Jetty Thateta 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	240.2	t	448,742	0	0	107,787,898	0.00	0	00-24
Temporary_Jetty	Deck pannel	880	m2	33,187	0	0	29,204,842	0.00	0	00-25
Temporary_Jetty	Guared rail installation	382	m	1,021	0	0	389,869	0.00	0	00-26
Temporary_Jetty	H400_L=40.7m_Pile_Driving_25m	110	nos	1,693,266	0	0	186,259,219	0.00	0	00-27
Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	124.84	t	686,036	0	0	85,644,785	0.00	0	00-28
Temporary Jetty	Guide(Pile)install_Driving_below13m H300	88	nos	483,790	0	0	42,573,536	0.00	0	00-29
Temporary Jetty	Guide(Frame)Install / Remove	110	nos	212,361	0	0	23,359,733	0.00	0	00-30
Temporary Jetty	Guide(Pile)Pulling_below13m H300	88	nos	260,502	0	0	22,924,211	0.00	0	00-31
Temporary Jetty	Remove superstructure	240.2	t	245,450	0	0	58,957,150	0.00	0	00-149
Temporary Jetty	Remove_deck pannel	880	m2	16,689	0	0	14,686,672	0.00	0	00-150
Temporary Jetty	Remove_Gurad rail	382	m	966	0	0	368,985	0.00	0	00-151
Temporary Jetty	H400_L=40m_Pile remove_Pulling25m	110	nos	317,421	0	0	34,916,355	0.00	0	00-152
Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	124.84	t	477,209	0	0	59,574,733	0.00	0	00-153
Temprary Jetty Thaketa	Material	1	LS	0	0	159,572,654	0	0.00	159,572,654	00-250
Subtotal		1	LS				666,647,989		159,572,654	
Per Unit Price		1	LS				666,647,989	0	159,572,654	

PKG2 - 4

Item: Temporary_Jetty Reference

Specification: for Concrete transportation 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	18.11	t	448,742	0	0	8,126,723	0.00	0	00-24
Temporary_Jetty	Deck pannel		m2	33,187	0	0	0	0.00	0	00-25
Temporary_Jetty	Guared rail installation	71.2	m	1,021	0	0	72,667	0.00	0	00-26
Temporary Jetty	H400_L=27.5m_Pile install_Driving_20m	39	nos	1,128,844	0	0	44,024,907	0.00	0	00-207
Temporary_Jetty	Falswork_Installation(Guide, Frame, Wale, Strut)	9.22	t	686,036	0	0	6,325,256	0.00	0	00-28
Temporary Jetty	Guide(Pile)Istallation_Driving_Below10m_H300	32	nos	398,415	0	0	12,749,294	0.00	0	00-208
Temporary Jetty	Guide(Frame)Install / Remove	39	nos	212,361	0	0	8,282,087	0.00	0	00-30
Temporary Jetty	Guide(Pile)Remove_pulling_below10m_H300	32	nos	225,769	0	0	7,224,600	0.00	0	00-209
Temporary Jetty	Remove superstructure	18.11	t	245,450	0	0	4,445,104	0.00	0	00-149
Temporary Jetty	Remove_deck pannel		m2	16,689	0	0	0	0.00	0	00-150
Temporary Jetty	Remove_Gurad rail	71.2	m	966	0	0	68,774	0.00	0	00-151
Temporary Jetty	H400_L=27.5m_Pile remove_Pulling_20m	39	nos	356,477	0	0	13,902,602	0.00	0	00-210
Temporary Jetty	Falswork_Remove(Guide, Frame, Wale, Strut)	9.22	t	477,209	0	0	4,399,864	0.00	0	00-153
Inclined Jetty	Material	1	LS	0	0	4,376,875	0	0.00	4,376,875	00-202
Subtotal		1	LS				109,621,878		4,376,875	
Per Unit Price		1	LS				109,621,878	0	4,376,875	

PKG2 - 5 121,150,539

Item: Reclamation of construction & stockyard Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	42218.915	m3	16,802	0.00	0.00	709,343,211	0.00	0	01-179
Shaping slope of embankment	By machinery for Sand soil	156	m2	2,479	0.00	0	386,729	0.00	0	00-19
Sodding	on slope	156	m2	1,169	0.00	0	182,334	0.00	0	00-33
Sheet pile driving	Nmax<50,Type III,shorter than 12m	485	nos	20,837	9.22	0.00	10,105,833	4,471.70	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	485	nos	11,788	5.35	0.00	5,717,253	2,594.75	0	00-92
Steel sheet pile	Type III	349.2	ton	927,504			323,884,397			Mat-163
Scrap	70%	-0.7		323,884,397			(226,719,078)			
Sheet pile driving	Nmax<50,Type II,shorter than 9m	618	nos	15,902	7.04	0.00	9,827,282	4,350.72	0	00-183
Sheet pile pulling	Nmax<50,shorter than 9m	618	nos	10,162	4.61	0.00	6,280,233	2,848.98	0	00-184
Steel sheet pile	Type II	237.312	ton	905,424			214,867,933			Mat-164
Scrap	70%	-0.7		214,867,933			(150,407,553)			
Cement stabilization		10557.5	m3	4,574	0.00	0.00	48,284,726	0.00	0	00-15
Cement material	Flexible container bag	633.450	t	84,600			53,589,870			Mat-166
*Volume=[Area(4960)*1m+Area(2090+1315+1000+1960+1020+2240+1570)*0.5m]*60kg/m3										
Base course leveling(Only compaction	Subbase t=200mm	3678	m2	980	0.00	0.00	3,603,815	0.00	0	00-187
	=(1920+393+715+650)m2*5 L									
TypeA	Concrete_t:10cm_Class E	546	m3	103,988	0.00	0.00	56,777,443	0.00	0	02-225
TypeB	Asphalt_t:5cm	187	m2	10,589	0.00	0.00	1,980,134	0.00	0	00-189
TypeC	Crushed stone_t:15cm	1381	m2	3,099	0.00	0.00	4,279,691	0.00	0	00-190
Subtotal		1	LS				1,071,984,253	14,266		
Per Unit Price		1	LS				1,071,984,253	14,266	0	

PKG2 - 7

Item: Foundation_cast in bored pile_RCD Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile Cast in Site_A2	RCD pile φ1500_L=31.5m	18	nos	13,522,631	965	234,427	243,407,361	17,375.2	4,219,686	00-273
Pile Cast in Site_P23	RCD pile φ2000_L=32.5m	12	nos	22,256,658	1,139	951,158	267,079,897	13,666.1	11,413,896	00-274
Pile Cast in Site_P24	RCD pile φ2000_L=47.0m	12	nos	28,702,268	1,391	1,111,101	344,427,220	16,687.2	13,333,212	00-275
Pile Cast in Site_P25	RCD pile φ2000_L=38.0m	8	nos	23,359,141	1,139	688,377	186,873,129	9,110.7	5,507,016	00-276
Subtotal		1	LS				1,041,787,607	56,839	34,473,810	
Per Unit Price		1	LS				1,041,787,607	56,839	34,473,810	

PKG2 - 8

Item: Abutment_2 Reference

Specification: Pile cap 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Excavation	Leveling of bottom	718.2	m3	2,098	0.0	0	1,506,518	0.00	0	00-87
Transportation of excavated soil	0	897.8	m3	2,970	0.0	0	2,665,869	0.00	0	00-77
Backfilling	Class_C,1m＜W1＜4m_Borrow material	203.3	m3	20,940	0	0	4,257,149	0.00	0	00-76
Leveling	by Machine	223.6	m2	365	0	0	81,502	0.00	0	00-75
Crush stone base work	Crush stone,t=20cm	223.6	m2	2,604	0.0	0	582,234	0.00	0	01-33
Concrete work(1)	18N/mm2	22.4	m3	95,194	0	0	2,132,356	0.00	0	00-52
Form work	for level concrete	6.3	m2	448	0.0	0	2,823	0.00	0	01-24
Concrete work for Pier(2)_On land	Class D	413	m3	91,334.54	0.00	0.00	37,721,165	0.00	0	00-78
Form work	for ordinal concrete_with&without rebar	118.6	m2	8,784.71	0.00	0.00	1,041,867	0.00	0	01-22
Rebar work_SD345	Arranging D13	0.165	ton	126,764	0.0	78,422	20,916	0.00	12,940	00-79
Rebar work_SD345	Arranging D16-D25	8.762	ton	114,348	0.0	81,271	1,001,913	0.00	712,097	00-80
Rebar work_SD345	Arranging D29-D32	11.994	ton	80,841	0.0	83,080	969,602	0.00	996,462	00-81
Rebar work_SD345	Assembling D13	0.165	ton	154,137	0.0	0	25,433	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	8.762	nos	128,135	0.0	0	1,122,715	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	11.994	ton	78,633	0.0	0	943,122	0.00	0	00-84
Sheet pile driving	Nmax<50,Type III,shorter than 12m	178	nos	20,837	9.2	0	3,708,945	1,641.16	0	00-91
Sheet pile pulling	Nmax<50,shorter than 12m	178	nos	11,788	5.4	0	2,098,291	952.30	0	00-92
Steel sheet pile	Typell	133.500	ton	927,504	0.0	0	123,821,784	0.00	0	Mat-163
Scrap	70%	-0.7		123,821,784	0.0	0	(86,675,249)	0.00	0	
Subtotal		1	nos				97,028,954	2,593	1,721,499	
Per Unit Price		1	nos				97,028,954	2,593	1,721,499	

PKG2 - 9

Item: Abutment_2 Reference

Specification: Wall, Parapet, Wing wall 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	179	m3	91,335	0	0	16,348,883	0	0	00-78
Form work	for ordinal concrete_with&without rebar	332.5	m2	8,785	0	0	2,920,916	0	0	01-22
Rebar work_SD345	Arranging D13	0.198	ton	126,764	0	78,422	25,099	0	15,528	00-79
Rebar work_SD345	Arranging D16-D25	6.283	ton	114,348	0	81,271	718,446	0	510,626	00-80
Rebar work_SD345	Arranging D29-D32	15.584	ton	80,841	0	83,080	1,259,819	0	1,294,719	00-81
Rebar work_SD345	Assembling D13	0.198	ton	154,137	0	0	30,519	0	0	00-82
Rebar work_SD345	Assembling D16-D25	6.283	nos	128,135	0	0	805,070	0	0	00-83
Rebar work_SD345	Assembling D29-D32	15.584	ton	78,633	0	0	1,225,413	0	0	00-84
Miscellaneous work	Form work_Cylindrical type ϕ170	19	nos	137,517	0	0	2,612,831	0	0	00-85
Falsework	Scaffloding (Handrail precede type)	328.2	m2	17,532	0	0	5,753,940	0	0	00-86
Supporting	Wedge type		m3	17,796	0	0	0	0	0	02-237
Non-shrink Mortar		0.700	m3	2,565,045	0	0	1,795,532	0	0	02-229
Subtotal		1	nos				33,496,468		1,820,873	
Per Unit Price		1	nos				33,496,468	0	1,820,873	

PKG2 - 10

Item: Pier_on Land Reference

Specification: Pile cap_Concrete 24N/mm2_Pier23,24,25 3 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks	
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)		
Excavation	Leveling of bottom	2742.7	m3	2,098	0.0	0	5,753,170	0.00	0	00-87	
Transportation of excavated soil		3428.4	m3	2,970	0.0	0	10,180,560	0.00	0	00-77	
Backfilling	Class_C,1m＜W1＜4m_Borrow material	1263.8	m3	20,940	0	0	26,464,263	0.00	0	00-76	
Leveling	by Machine	608.4	m2	365	0	0	221,762	0.00	0	00-75	
Crush stone base work	Crush stone,t=20cm	608.4	m2	2,604	0.0	0	1,584,219	0.00	0	01-33	
Concrete work(1)	18N/mm2	60.9	m3	95,194	0	0	5,797,342	0.00	0	00-52	
Form work	for level concrete	17.7	m2	448	0.0	0	7,932	0.00	0	01-24	
Concrete work for Pier(2)_On land	Class D	1180.5	m3	91,334.54	0.00	0.00	107,820,424	0.00	0	00-78	
Form work	for ordinal concrete_with&without rebar	347.4	m2	8,784.71	0.00	0.00	3,051,808	0.00	0	01-22	
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0.0	78,422	0	0.00	0	00-79	
Rebar work_SD345	Arranging D16-D25	19.735	ton	114,348	0.0	81,271	2,256,649	0.00	1,603,883	00-80	
Rebar work_SD345	Arranging D29-D32	81.658	ton	80,841	0.0	83,080	6,601,279	0.00	6,784,147	00-81	
Rebar work_SD345	Arranging D35	28.005	ton	126,764	0	80,321	3,550,012	0.00	2,249,390	00-225	
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0.0	0	0	0.00	0	00-82	
Rebar work_SD345	Assembling D16-D25	19.735	nos	128,135	0.0	0	2,528,736	0.00	0	00-83	
Rebar work_SD345	Assembling D29-D32	81.658	ton	78,633	0.0	0	6,420,996	0.00	0	00-84	
Rebar work_SD345	Assembling D35	28.005	ton	154,137	0.0	0	4,316,605	0	0	00-229	
Sheet pile driving	Nmax<50,Type III,shorter than 12m	511	nos	20,837	9.2	0	10,647,589	4,711.42	0	00-91	
Sheet pile pulling	Nmax<50,shorter than 12m	511	nos	11,788	5.4	0	6,023,745	2,733.85	0	00-92	
Sheet pile driving	Nmax<50,Type V,shorter than 25m	148	nos	46,482	21	0	6,879,339	3,044.36	0	00-185	
Sheet pile pulling	Nmax<50,shorter than 25m	148	nos	19,647	9	0	2,907,743	1,318.68	0	00-186	
Falsework(Guide,Frame,Wale,Strut)	H-beam_Install / Remove	124.662	ton	124,838	0.0	0	15,562,551	0.00	0	00-93	for P23
Steel sheet pile	PKG2_on Land	1.000	LS	689,159,851	0	0	689,159,851	0.00	0	00-277	
H beam	H400x400x13x21	124.662	ton	0	0.0	69,300	0	0.00	8,639,077	Mat-169	for P23
Scrap	70%	-0.7		689,159,851	0.0	8,639,077	(482,411,895)	0.00	-6,047,354		
Subtotal		3	nos				435,324,678	11,808	13,229,143		
Per Unit Price		1	nos				145,108,226	3,936.10	4,409,714		

PKG2 - 11

Item: Pier_on Land Reference

Specification: Column_24N/mm2_P24-25 2 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class D	303.5	m3	91,335	0	0	27,720,033	0	0	00-78
Form work	for ordinal concrete_with&without rebar	276.1	m2	8,785	0	0	2,425,458	0	0	01-22
Rebar work_SD345	Arranging D13	0.872	ton	126,764	0	78,422	110,538	0	68,384	00-79
Rebar work_SD345	Arranging D16-D25	23.539	ton	114,348	0	81,271	2,691,627	0	1,913,038	00-80
Rebar work_SD345	Arranging D29-D32		ton	80,841	0	83,080	0	0	0	00-81
Rebar work_SD345	Assembling D13	0.872	ton	154,137	0	0	134,407	0	0	00-82
Rebar work_SD345	Assembling D16-D25	23.539	nos	128,135	0	0	3,016,160	0	0	00-83
Rebar work_SD345	Assembling D29-D32	0.000	ton	78,633	0	0	0	0	0	00-84
Miscellaneous work	Form work_Cylindrical type ϕ170	40	nos	137,517	0	0	5,500,697	0	0	00-85
Falsework	Scaffloding (Handrail precede type)	319.5	m2	17,532	0	0	5,601,413	0	0	00-86
Supporting	Wedge type		m3	17,796	0	0	0	0	0	02-237
Non-shrink Mortar		2.600	m3	2,565,045	0	0	6,669,117	0	0	02-229
Subtotal		2	nos				53,869,451		1,981,422	
Per Unit Price		1	nos				26,934,725	0	990,711	

PKG2 - 12

Item: Pier_on Land Reference

Specification: Column_30N/mm2_P23 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work for Pier(2)_On land	Class C I	422.8	m3	97,031	0	0	41,024,673	0	0	00-56
Form work	for ordinal concrete_with&without rebar	377.1	m2	8,785	0	0	3,312,714	0	0	01-22
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0	78,422	0	0	0	00-79
Rebar work_SD345	Arranging D16-D25	32.139	ton	114,348	0	81,271	3,675,017	0	2,611,969	00-80
Rebar work_SD345	Arranging D29-D32	7.272	ton	80,841	0	83,080	587,873	0	604,158	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0	0	0	0	0	00-82
Rebar work_SD345	Assembling D16-D25	32.139	nos	128,135	0	0	4,118,117	0	0	00-83
Rebar work_SD345	Assembling D29-D32	7.272	ton	78,633	0	0	571,818	0	0	00-84
Rebar work_SD390	Arranging D16-D25		ton	114,348	0	79,372	0	0	0	00-212
Rebar work_SD390	Arranging D29-D32	28.647	ton	80,841	0	80,321	2,315,840	0	2,300,956	00-213
Rebar work_SD390	Assembling D16-D25	0	ton	128,135	0	0	0	0	0	00-215
Rebar work_SD390	Assembling D29-D32	28.647	ton	78,633	0	0	2,252,593	0	0	00-216
Miscellaneous work	Form work_Cylindrical type φ170	20	nos	137,517	0	0	2,750,348	0	0	00-85
Non-shrink Mortar		1.300	m3	2,565,045	0	0	3,334,559	0	0	02-229
Falsework	Scaffloding (Handrail precede type)	496.8	m2	17,532	0	0	8,709,803	0	0	00-86
Supporting	Wedge type	157.2	m3	17,796	0	0	2,797,545	0	0	02-237
Subtotal		1	nos				75,450,900		5,517,083	
Per Unit Price		1	nos				75,450,900	0	5,517,083	

PKG2 - 13

Item: Foundation_SPSP(P21_22) Reference

Specification: Construction Method (from Jetty) 2 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide_PKG2	Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty	44	nos	203,686	55	65,902	8,962,177	2,424.4	2,899,670	00-278
Guide_PKG2	Guide(Frame)Falswork_Install_from Jetty	224	t	320,266	0	19,969	71,739,640	0.0	4,473,011	00-279
Steel Pipe Sheet Pile Driving_PKG2	PKG2_from Jetty_P21_22	1	LS	443,103,485	209,910	0	443,103,485	209,909.5	0	00-280
Material cost_PKG2_from Jetty_P21_2	Steel Pipe Sheet Pile	1	LS	0	1,395,609	0	0	1,395,608.8	0	00-281
Excavation inside of the pipe pile		610	m3	91,385	0.0	0	55,744,844	0.0	0	00-61
Concrete Filling to Steel Pipe		492.9	m3	116,062	0.0	0	57,206,777	0.0	0	00-62
Cleaning of Inside joint pipe		6890	m	7,453	1.4	0	51,351,721	9,783.8	0	00-63
Mortar filling of Inside joint pipe		5295.6	m	3,457	0.0	103	18,308,902	0.0	545,500	00-64
Sealing of Inside joint pipe	P-P_type	1310.4	m	1,854	0.0	621	2,430,045	0.0	813,405	00-65
Excavation inside of the well		1557.8	m3	22,464	6.5	0	34,994,154	10,125.7	0	00-66
Spread sand		85.6	m3	53,032	10.0	0	4,539,504	855.1	0	00-67
Bottom slab concrete		342.5	m3	138,022	0.0	0	47,272,429	0.0	0	00-68
Falswork Install / Remove	Install65%_Remove35%	52	t	771,851	0.0	20,125	40,136,240	0.0	1,046,510	00-69
Concrete filling to space between steel pipe well and wale		70	m3	671,092	0.0	0	46,976,433	0.0	0	00-70
Welding of the dowel	Stud welding_1,000mm 1 row 4nos	1792	nos	7,286	0.0	2,994	13,055,670	0.0	5,365,212	00-71
Welding of the dowel	Stud welding_700mm 1 row 4nos	4256	nos	7,286	0.0	2,819	31,007,216	0.0	11,998,302	00-72
Steel pipe sheet pile Cut&Removal		64	nos	342,320	15.0	0	21,908,456	959.4	0	00-73
Subtotal		2	nos				948,737,693	1,629,667	27,141,610	
Per Unit Price		1	nos				474,368,846	814,833.4	13,570,805	

PKG2 - 14

Item: Foundation_SPSP(P14_15_16_17_18_19_20) Reference

Specification: Construction Method (on barge) 7 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide_PKG2_on barge	Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer	154	nos	622,545	55	70,373	95,871,855	8,485.4	10,837,411	00-282
Guide_PKG2_on barge	Guide(Frame)Falswork_Install	106.204	t	1,279,114	0	19,969	135,847,048	0.0	2,120,766	00-283
Steel Pipe Sheet Pile Driving_PKG2	PKG2_on barge	1	LS	4,523,749,943	734,683	0	4,523,749,943	734,683.3	0	00-284
Material cost_PKG2_on barge	Steel Pipe Sheet Pile	1	LS	0	5,337,578	0	0	5,337,577.5	0	00-285
Excavation inside of the pipe pile		2298.7	m3	91,385	0.0	0	210,066,677	0.0	0	00-61
Concrete Filling to Steel Pipe		1961.13	m3	116,062	0.0	0	227,611,944	0.0	0	00-62
Cleaning of Inside joint pipe		13035.9	m	7,453	1.4	0	97,157,606	18,511.0	0	00-63
Mortar filling of Inside joint pipe		11976.8	m	3,457	0.0	103	41,408,349	0.0	1,233,730	00-64
Sealing of Inside joint pipe	P-P_type	2970	m	1,854	0.0	621	5,507,657	0.0	1,843,568	00-65
Excavation inside of the well		7000.35	m3	22,464	6.5	0	157,254,672	45,502.3	0	00-66
Spread sand		407.42	m3	53,032	10.0	0	21,606,130	4,070.1	0	00-67
Bottom slab concrete		1755.7	m3	138,022	0.0	0	242,324,681	0.0	0	00-68
Falswork Install / Remove	Install65%_Remove35%	353.4	t	771,851	0.0	20,125	272,772,062	0.0	7,112,246	00-69
Concrete filling to space between steel pipe well and wale		234.2	m3	671,092	0.0	0	157,169,723	0.0	0	00-70
Welding of the dowel	Stud welding_1,000mm 1 row 4nos	6932	nos	7,286	0.0	2,994	50,503,294	0.0	20,754,269	00-71
Welding of the dowel	Stud welding_700mm 1 row 4nos	16468	nos	7,286	0.0	2,819	119,978,108	0.0	46,425,762	00-72
Steel pipe sheet pile Cut&Removal		252	nos	342,320	15.0	0	86,264,544	3,777.5	0	00-73
Subtotal		7	nos				6,445,094,293	6,152,607	90,327,752	
Per Unit Price		1	nos				920,727,756	878,943.9	12,903,965	

PKG2 - 15

Item: Pier_on River_PKG2 Reference

Specification: Pile cap 9 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pile cap										
Pile cap_on River	Class D	4170.9	m3	105,754	0	0	441,089,651	0	0	00-50
Rebar work_SD345	Arranging D13	2.391	ton	126,764	0	78,422	303,092	0	187,507	00-79
Rebar work_SD345	Arranging D16-D25	60.024	ton	114,348	0	81,271	6,863,599	0	4,878,211	00-80
Rebar work_SD345	Arranging D29-D32	148.921	ton	80,841	0	83,080	12,038,859	0	12,372,357	00-81
Rebar work_SD345	Assembling D13	2.391	ton	154,137	0	0	368,541	0	0	00-82
Rebar work_SD345	Assembling D16-D25	60.024	nos	128,135	0	0	7,691,150	0	0	00-83
Rebar work_SD345	Assembling D29-D32	148.921	ton	78,633	0	0	11,710,072	0	0	00-84
Rebar work_SD345	Arranging D35	14.860	ton	126,764	0	80,321	1,883,706	0.00	1,193,570	00-225
Rebar work_SD345	Arranging D51	192.876	ton	126,764	0	83,080	24,449,641	0	16,024,138	00-227
Rebar work_SD345	Assembling D35	14.860	ton	154,137	0.0	0	2,290,475	0	0	00-229
Rebar work_SD345	Assembling D51	192.876	ton	154,137	0	0	29,729,315	0	0	00-232
Mechanical joint	D38, deformed bar		nos	0	0	3,006	0	0	0	Mat-293
Mechanical joint	D51, deformed bar	530	nos	0	0	5,832	0	0	3,090,960	Mat-295
Crawler crane	50～55t hang	189.00	day	297,147	0		56,160,821	0		OPE-26
Barge	800t	189.00	day	1,388,221	0	0	262,373,798	0	0	Mac-d(20)
*10.5 months of pile cap schedule										
estimated about 60 % is for Rebar work										
= 10.5 months * 0.6 = 6.3 month	6.3 months * 30 days = 189 days									
Subtotal		9	nos				856,952,718		37,746,743	
Per Unit Price		1	nos				95,216,969	0	4,194,083	

PKG2 - 16

Item: Pier_on River_PKG2 Reference

Specification: Column_30N/mm2 9 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pier										
Concrete work for Pier(2)_On river	Class C I	7838.3	m3	111,351	0	0	872,802,073	0	0	00-89
Rebar work_SD345	Arranging D13	0.000	ton	126,764	0	78,422	0	0	0	00-79
Rebar work_SD345	Arranging D16-D25	508.623	ton	114,348	0	81,271	58,159,804	0	41,336,300	00-80
Rebar work_SD345	Arranging D29-D32	70.872	ton	80,841	0	83,080	5,729,333	0	5,888,046	00-81
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0	0	0	0	0	00-82
Rebar work_SD345	Assembling D16-D25	508.623	nos	128,135	0	0	65,172,194	0	0	00-83
Rebar work_SD345	Assembling D29-D32	70.872	ton	78,633	0	0	5,572,862	0	0	00-84
Rebar work_SD390	Arranging D38	541.809	ton	126,764	0	84,119	68,681,616	0	45,576,431	00-218
Rebar work_SD390	Assembling D38	541.809	ton	154,137	0	0	83,512,776	0	0	00-222
Rebar work_SD390	Arranging D29-D32	65.652	ton	80,841	0	80,321	5,307,345	0	5,273,234	00-213
Rebar work_SD390	Assembling D29-D32	65.652	ton	78,633	0	0	5,162,399	0	0	00-216
Mechanical joint	D38, deformed bar	4264	nos	0	0	3,006	0	0	12,817,584	Mat-293
Mechanical joint	D51, deformed bar		nos	0	0	5,832	0	0	0	Mat-295
Crawler crane	50～55t hang	315.00	day	297,147	0		93,601,368	0		OPE-26
Barge	800t	315.00	day	1,388,221	0	0	437,289,663	0	0	Mac-d(20)
*17.5 months of pier schedule, about 60% is for rebar work_ 17.5months*0.6*30days										
Non-shrink Mortar		14.668	m3	2,565,045	0	0	37,624,080	0	0	02-229
Form work	Ordinal type	3844.3	m2	13,806	0	0	53,076,136	0	0	00-156
Form work	Plywood curved panel	1597.7	m2	17,762	0	0	28,377,708	0	0	00-157
Scaffolding	Hand rail precede type	7729.7	m2	9,747	0	289	75,338,217	0	2,231,023	00-158
Supporting	Wedge type	1036.1	m3	17,796	0	0	18,438,529	0	0	02-237
Bracket support_PKG2	Pierhead_coping	9	set	80,112,741	0	0	721,014,672	0	0	00-160
Subtotal		9	nos				2,634,860,776		113,122,618	
Per Unit Price		1	nos				292,762,308	0	12,569,180	

PKG2 - 17

Item: Approach slab Reference

Specification: A2 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	31.40	m3	99,456	0	0	3,122,928	0	0	00-51
Rebar work_SD345	Arranging D13	0.326	ton	126,764	0	78,422	41,325	0	25,566	00-79
Rebar work_SD345	Arranging D16-D25	2.640	ton	114,348	0	81,271	301,878	0	214,555	00-80
Rebar work_SD345	Arranging D29-D32	2.958	ton	80,841	0	83,080	239,126	0	245,751	00-81
Rebar work_SD345	Assembling D13	0.326	ton	154,137	0	0	50,249	0	0	00-82
Rebar work_SD345	Assembling D16-D25	2.640	nos	128,135	0	0	338,275	0	0	00-83
Rebar work_SD345	Assembling D29-D32	2.958	ton	78,633	0	0	232,596	0	0	00-84
Form work	for ordinal concrete_with&without rebar	7.70	m2	8,785	0	0	67,642	0	0	01-22
Subtotal		1	nos				4,394,018		485,872	
Per Unit Price		1	nos				4,394,018	0	485,872	

PKG2 - 18

Item: Approach slab Reference

Specification: AF1 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	18.90	m3	99,456	0	0	1,879,724	0	0	00-51
Rebar work_SD345	Arranging D13	0.713	ton	126,764	0	78,422	90,382	0	55,915	00-79
Rebar work_SD345	Arranging D16-D25	0.589	ton	114,348	0	81,271	67,351	0	47,869	00-80
Rebar work_SD345	Arranging D29-D32	1.413	ton	80,841	0	83,080	114,228	0	117,392	00-81
Rebar work_SD345	Assembling D13	0.713	ton	154,137	0	0	109,900	0	0	00-82
Rebar work_SD345	Assembling D16-D25	0.589	nos	128,135	0	0	75,471	0	0	00-83
Rebar work_SD345	Assembling D29-D32	1.413	ton	78,633	0	0	111,108	0	0	00-84
Form work	for ordinal concrete_with&without rebar	7.30	m2	8,785	0	0	64,128	0	0	01-22
Subtotal		1	nos				2,512,292		221,176	
Per Unit Price		1	nos				2,512,292	0	221,176	

PKG2 - 19

Item: Superstructure Reference

Specification: Steel box girder bridge 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks	
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)		
Fabrication of steel girder		1	L.S.			3,591,563,826			3,591,563,826	Quatation	
Erection of girder	PKG2	1	L.S.	2,868,102,557	129,264	170,378,149	2,868,102,557	129,264	170,378,149	00-287	
Dead-bolting including temporary ere	Steel box girder_PKG2	587,970	nos	286	0	47	168,053,585	0	27,869,778	01-281	
Painting in site	Steel box girder_PKG2	1	LS	205,994,940	0	50,493,000	205,994,940	0	50,493,000	00-288	
Bearing setting	Steel box girder_PKG2	1	LS	30,538,704	1,383,862	0	30,538,704	1,383,862	0	00-289	
Expaansion Joint setting	Steel box girder_PKG2	1	LS	2,977,201	0	36,515,994	2,977,201	0	36,515,994	00-290	
Wheel Guard & Median Strip	Cast in site for Steel box girder	1	LS	99,849,687	0	4,668,823	99,849,687	0	4,668,823	00-291	
Installation of barrier, railing	0	3120	m	4,312	0	0	13,452,691	0	0	01-134	
Barrier fabrication	Steel box girder(PKG2)	1	LS	0	0	70,658,796	0	0	70,658,796	01-200	
Drainage work	For Any	152	nos	13,704	0	53,767	2,083,037	0	8,172,584	00-106	
Transportation in site	Special trailer 60 t	4.50	month	13,594,952	0	0	61,177,284	0	0	01-213	share00-294
Temporary placing	by 70 t CC	280	block	38,912	0	0	10,895,265	0	0	01-105	
Transportation in site(Segment&Con.	by Carriage (carriage length: below 200m)	140	nos	294,178	0	0	41,184,923	0	0	01-107	
Loading on barge	by 200 t CC and 200 t TC	140	Time	319,983	0	0	44,797,550	0	0	01-108	
Transportation on river(con. Block)	by 800 t barge	8	month	1,388,221	0	0	11,105,769	0	0		
Facilities and Concrete Base for Reas	(Package-2)	1	LS	35,007,859	0	24,743,400	35,007,859	0	24,743,400	00-292	
Accessory&Miscellaneous work	Steel box Bridge(PKG2)	1	LS	0	0	11,014,948	0	0	11,014,948	00-163	
Subtotal		1	LS				3,595,221,052	1,513,126	3,996,079,298		
Per Unit Price		1	LS				3,595,221,052	1,513,126	3,996,079,298		

PKG2 - 20

Item: Superstructure Reference

Specification: PC box girder_SBS_PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication of precast segment	Shortline matching method_PKG2	1	LS	1,568,984,069	473,525	67,583,590	1,568,984,069	473,525	67,583,590	00-293
Erection	Span by span method_PKG2	1	LS	597,518,033	0	130,978,722	597,518,033	0	130,978,722	00-294
Prestressing	PKG2	1	LS	324,883,911	0	108,791,188	324,883,911	0	108,791,188	00-295
Bearing setting	PC Box(PKG2)	1	LS	22,179,858	1,873,634	0	22,179,858	1,873,634	0	00-296
Expansion joint setting	PC Box_PKG2	1	LS	2,343,822	0	25,065,000	2,343,822	0	25,065,000	00-297
Wheel Guard & Median Strip	Cast in site_PC box_PKG2	1	LS	54,768,023	0	1,835,075	54,768,023	0	1,835,075	00-300
Installation of barrier, railing		1200	m	4,312	0	0	5,174,112	0	0	01-134
Barrier Fabrication	PC box_PKG2	1	LS	1,794,291	0	28,547,881	1,794,291	0	28,547,881	00-301
Drainage work	PC box_PKG2	1	LS	10,760,234	0	1,613,011	10,760,234	0	1,613,011	00-302
Manhole cover	PC box	4	nos	224,710	0	16,843	898,840	0	67,371	00-177
Pier Head Cast in Place_temporary expense		7	pier	14,779,967	0	373,627	103,459,771	0	2,615,389	00-182
Pier head temporary bearing										
Pier head temporary bearing	200 t hydraulic jack*16 nos/pier*8 month*30 d	11,520	nos-day			2,070			23,846,400	CEDC_18-7_200-001
	*only for 3 piers under erection girder									
Concrete cast in place										
Form fabrication, installation, and removal		520.00	m2	26,799	0	0	13,935,620	0	0	01-257
Concrete (Cast-in-place)	50 Mpa	340	m3	114,016	0	0	38,765,491	0	0	01-259
Subtotal		1	LS				2,745,466,075	2,347,160	390,943,627	
Per Unit Price		1	LS				2,745,466,075	2,347,160	390,943,627	

PKG1 - 21

Item: Bridge Name Plate Installation Works Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bridge Name Plate Installation Works		1	nos	1,902,479.29	0.00	0.00	1,902,479	0	0	00-119
Subtotal		1	LS				1,902,479			
Per Unit Price		1	LS				1,902,479	0	0	

PKG2 - 22

Item: Approach road Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Cutting&Dozing	by bulldozer for loose soil(sand)	25234	m3	1,347	0	0	33,987,675	0	0	00-18
Excavation&Loading	Loose sand_Backhoe･Full bucket0.6m3	31543	m3	1,154	0	0	36,415,501	0	0	00-4
Backfilling of A2	Class_C,1m＜W1＜4m_Borrow material	5171	m3	20,940	0	0	108,281,929	0	0	00-76
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	38598	m3	16,802	0	0	648,506,227	0	0	01-179
Shaping slope of embankment	By machinery for Sand soil	2527	m2	2,584	0	0	6,528,555	0	0	00-37
										00-19
Sodding	on slope	2527	m2	1,169	0	0	2,953,583	0	0	00-33
Subtotal		1	LS				836,673,470			
Per Unit Price		1	LS				836,673,470	0	0	

PKG2 - 23

Item: Soft Soil Treatment Reference

Specification: PKG2_Main road 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Deep mixing method	2 axis φ1200_18-22m	112	set	32,009	0	81,904	3,585,012	0	9,173,248	00-328
Deep mixing method	2 axis φ1200_15-18m	486	set	26,674	0	68,253	12,963,661	0	33,170,958	00-329
Deep mixing method	2 axis φ1200_12-15m	816	set	22,864	0	58,502	18,656,689	0	47,737,632	00-330
Deep mixing method	2 axis φ1200_7-9m	39	set	16,005	0	40,951	624,176	0	1,597,089	00-331
Deep mixing method	2 axis φ1200_6-7m	150	set	14,550	0	37,229	2,182,436	0	5,584,350	00-332
Deep mixing method	2 axis φ1200_5-6m	117	set	13,337	0	34,126	1,560,441	0	3,992,742	00-333
Deep mixing method			LS			324,510,510			0	Quatation
*as reference										
Soil Cement Colmuns	(Preliminary Test Colums; Non-working Pile) includ	1	LS	0.00	0.00	11,000,000	0.00	0.00	11,000,000	Quatation
Cement material	Ordinal portland cement	19,161.40	t	84,600	0	0	1,621,054,440	0	0	Mat-53
Levelling & compacting soil	Amount is over 10,000m3_Borrowed material	48516	m3	16,801.55	0.00	0.00	815,144,000	0.00	0	01-179
Sand mat	Sand mat for preloading	61308	m3	18,451.32	0.00	0.00	1,131,213,527	0.00	0	01-180
Cement stabilization		11585	m3	4,574	0.00	0.00	52,983,998	0.00	0	00-15
Cement material	Ordinal portland cement	2627	t	84,600			222,217,974			Mat-166
Subtotal		1	LS				3,882,186,353		112,256,019	
Per Unit Price		1	LS				3,882,186,353	0	112,256,019	

PKG2 - 24

Item: Mechanically Stabilized Earth Wall Reference H24MLIT P94

Specification: PKG2_Main road 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Mechanically Stabilized Earth Wall										
Precast Panels Installation Works	Reinforced Retaining Wall (Type 1)	1087.4	m2	217,778	0	0	236,811,623	0	0	00-124
Reinforcement Material Installation Wo	Reinforced Retaining Wall (Type 1)	9878	m	167	0	1,233	1,650,219	0	12,179,574	00-125
Fill, Level & Compaction Works	Reinforced Retaining Wall (Type 1)	2232.3	m3	2,233	0	0	4,984,346	0	0	00-126
Concret work_other material installati	Reinforced Retaining Wall (Type 1)	1	LS	88,086,442	0	4,659,007	88,086,442	0	4,659,007	00-303
Base concrete of Reinforced Retainin	Base concrete	1	LS	9,961,468	0	0	9,961,468	0	0	00-304
Installation of barrier, railing	0		m	4,312	0	0	0	0	0	01-134
Barrier Fabrication	on Mechanically Stabilized Earth Wall		LS	152,113	0	2,420,179	0	0	0	00-180
Subtotal		1	LS				341,494,098		16,838,581	
Per Unit Price		1	LS				341,494,098	0	16,838,581	

PKG2 - 26

Item: Drainage work_approach road Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
U-Ditch_without_cover	B/H=0.3/0.3m	26.207	m	50,923	0	0	1,334,533	0	0	00-272
U-Ditch_with_cover	B/H=1.5/2.5m	1111.563	m	563,775	0	8,070	626,671,586	0	8,969,869	00-137
Catch Pit	B/L=0.6/0.4m,H=0.5m	32	nos	174,374	0	0	5,579,966	0	0	00-253
Catch Pit	B/L=0.5/0.5m,H=0.7m	17	nos	94,026	0	0	1,598,448	0	0	00-252
Catch Pit	B/L=0.435/0.6m,H=0.75m	2	nos	206,344	0	0	412,689	0	0	00-251
Catch Pit	B/L=0.6/0.4m,H=0.5m	4	nos	176,935	0	0	707,738	0	0	00-250
Catch Pit	B/L=0.6/0.6m,H=1.1m	4	nos	413,240	0	11,821	1,652,961	0	47,284	00-325
Pipe culvert	φ0.3m,360° concreted_A	102.064	m	55,031	0	1,145	5,616,654	0	116,863	00-254
Pipe culvert	φ0.3m,360° concreted_B	358.097	m	58,156	0	1,145	20,825,407	0	410,021	00-255
Vertical Drain	TypeA_PKG2	1	LS	3,647,481	0	0	3,647,481	0	0	00-260
Vertical Drain	TypeB_PKG2	1	LS	1,404,962	0	623	1,404,962	0	623	00-261
Setting of Flap Gate	1500*2000	2.00	set	1,268,335	0	7,704,000	2,536,669	0	15,408,000	01-264
Outlet_TypeB_Left	PKG2	1.00	LS	12,886,268	0	247,226	12,886,268	0	247,226	00-257
Outlet_TypeB_Right	PKG2	1.00	LS	12,315,624	0	247,226	12,315,624	0	247,226	00-258
Subtotal		1	LS				697,190,988		25,447,112	
Per Unit Price		1	LS				697,190,988	0	25,447,112	

PKG2 - 27

Item: Pavement on bridge surface Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement	on Steel deck	13942.8	m2	62,136	0	11,888	866,350,936	0	165,747,545	00-334
Pavement	on Concrete deck	5391	m2	18,541	0	2,138	99,952,429	0	11,523,263	00-335
Pavement	on Steel deck	13942.8	m2	61,298		11,870	854,666,827		165,501,036	
Pavement	on Concrete deck	5391	m2	47,800			257,689,800			
*as reference										
not into cal.										
Subtotal		1	LS				966,303,365		177,270,808	
Per Unit Price		1	LS				966,303,365	0	177,270,808	

PKG2 - 28

Item: Pavement_Approach_road_main Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	9282	m2	597	0	0	5,537,456	0	0	00-5
Road base	Subbase courset=500mm		m2	10,005	0	0	0	0	0	00-266
Road base	Subbase courset=350mm	14702.9	m2	6,905	0	0	101,528,671	0	0	00-265
Road base	Base course t=250mm	9973.94	m2	7,814	0	0	77,931,979	0	0	00-262
Pavement	Binder course t=50mm W>=3m, including prime coat	10614.919	m2	11,383	0	0	120,826,969	0	0	00-9
Pavement	Surface course t=50mmW>=3.0m, including tack coat	10855.919	m2	10,909	0	0	118,426,678	0	0	00-8
Subtotal		1	LS				424,251,752			
Per Unit Price		1	LS				424,251,752	0	0	

PKG2 - 29

Item: Pavement_Rigid_Approach_road Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Road base	Base course t=100mm	4112	m2	3,321	0	0	13,657,967	0	0	00-305
Concrete work(1)	18N/mm2	155	m3	95,194	0	0	14,755,140	0	0	00-52
Form work	for ordinal concrete_with&without rebar		m2	8,785	0	0	0	0	0	01-22
Concrete work	24N/mm2	1,091.25	m3	99,456	0	0	108,531,676	0	0	00-51
Form work	for ordinal concrete_with&without rebar		m2	8,785	0	0	0	0	0	01-22
Rebar net	Φ6 / 150x150mm	10293	m2	0	0	239	0	0	2,454,881	Mat-447
TRANSVERSE JOINT φ28	PLAIN DOWEL BAR	3.275	t	0	0	76,500	0	0	250,538	Mat-448
LONGITUDINAL JOINT										
Rebar work_SD345	Arranging D16-D25	14.242	ton	114,348	0	81,271	1,628,538	0	1,157,462	00-80
Rebar work_SD345	Assembling D16-D25	14.242	nos	128,135	0	0	1,824,893	0	0	00-83
Foreman	0.7 person / 100 m2 *2.5	28.8	person	21,870			629,506			
Skilled Labour	2.16 person / 100 m2 *2.5	88.8	person	14,580			1,294,984			
Unskilled Labour	4.87 person / 100 m2 *2.5	200.3	person	12,150			2,433,091			
Concrete finisher	5-8.5m	49.7552	hr	6,158		2,273	306,377		113,084	OPE-78
Concrete leveler	5-8.5m	49.7552	hr	3,688		1,246	183,502		62,015	OPE-77
Rough terrain crane	25t hang	4.9344	day	232,008	0		1,144,820	0		OPE-27
Subtotal		1	LS				146,390,494		4,037,980	
Per Unit Price		1	LS				146,390,494	0	4,037,980	

PKG2 - 30

Item: Electrical work Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Lightning work	PKG2	1	LS	0	0	94,494,226	0	0	94,494,226	00-314
Power supply equipment	PKG2	1	LS	0	0	19,138,275	0	0	19,138,275	00-315
Subtotal		1	LS						113,632,501	
Per Unit Price		1	LS				0	0	113,632,501	

PKG1 - 31

Item: Retaning Wall (L Shape Type) Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Retaining Wall (Type 2)	24N/mm2	241.680	m3	88,757	0	0	21,450,898	0	0	02-06
Rebar work_SD345	Arranging D13	79.080	ton	126,764	0	78,422	10,024,459	0	6,201,612	00-79
Rebar work_SD345	Assembling D13	79.080	ton	154,137	0	0	12,189,148	0	0	00-82
Form work	for ordinal concrete_with&without rebar	754.45	m2	8,785	0	0	6,627,624	0	0	01-22
Subtotal		1	LS				50,292,130		6,201,612	
Per Unit Price		1	LS				50,292,130	0	6,201,612	

PKG1 - 32

Item: Toll Plaza Reference

Specification: Toll Plaza Facility 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Toll Plaza Facility	Toll Island (1.8m x 25.0m)	7.000	set			1,031,898			7,223,286	
Toll Plaza Facility	Toll Island (2.2m x 25.0m)	2.000	set			21,027,927			42,055,854	
Toll Plaza Facility	Steel Large Roof (12.0m x 50.8m)	1.000	set			61,801,781			61,801,781	
Toll Plaza Facility	Steel Booth (1.2m x 3.9m)	9	set			7,881,500			70,933,500	
Toll Plaza Facility	Steel Booth (1.4m x 6.0m)	1	set			7,881,500			7,881,500	
Toll Plaza Facility	Steel Staircase (Height: 3.5m)	1	LS			2,819,322			2,819,322	
Subtotal		1	LS						192,715,243	
Per Unit Price		1	LS				0	0	192,715,243	

PKG1 - 33

Item: Toll Plaza Reference

Specification: Administrative Office_PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Building/Equipment		1.000	LS			58,546,511			58,546,511	
Subtotal		1	LS						58,546,511	
Per Unit Price		1	LS				0	0	58,546,511	

PKG2 - 34

Item: Accessory_Approach road Reference

Specification: for Approach road_PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guard-rail installation	Metal type(GR-A)	634.202	m	3,098	0	30,000	1,964,916	0	19,026,060	00-129
Concrete Kerb Type A-1		607.377	lm	7,000			4,251,639			
Concrete Kerb Type E		95.347	lm	6,000			572,082			
Concrete Seal (t = 100 mm, with Wire Net)		1241.797	m2	40,000			49,671,880			
Concrete Seal (t = 70 mm)		44.961	lm	40,000			1,798,440			
Median Type A		81.56	lm	10,000			815,600			
Median Type B		165.277	lm	10,000			1,652,770			
Road Markings Solid Line (W=100mm)		5989.937	lm	1,980			11,860,075			
Road Markings Solid Line (W=150mm)		17.427	lm	2,323			40,483			
Road Markings Solid Line (W=300mm)		14.022	lm	5,500			77,121			
Road Markings Solid Line (W=450mm)		24.984	lm	6,852			171,190			
Toll Ahead Marks		4	Nos.	3,903			15,612			
Arrow Marks		9	Nos.	3,903			35,127			
Ligjtning Foundation	Cast in site_PKG2_Approach_Main	1	LS	597,427	0	25,095	597,427	0	25,095	00-338
Subtotal		1	LS				73,524,362		19,051,155	
Per Unit Price		1	LS				73,524,362	0	19,051,155	

PKG2 - 35

Item: Inspection Ladder Reference

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication	Inspection Ladder for P5, 20	1	LS	58,065	0	518,142	58,065	0	518,142	00-356
Fabrication	Inspection Ladder for P10, 13	1	LS	63,738	0	498,983	63,738	0	498,983	00-357
Installation	Inspection Ladder	2	set	879,086	0	0	1,758,171	0	0	00-358
Subtotal		1	LS				121,803		1,017,125	
Per Unit Price		1	LS				121,803	0	1,017,125	

00- 1

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item: Levelling & compacting soil

Reference H24MLIT P36

Specification: Filled up ground material 10,000m3 below ,発生土

0.00 Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	15 t	0.15	日	272,216.00			40,832.40			OPE-14
Tire roller	8－20t	0.08	日	270,040.00			21,603.20			OPE-5
Unskilled Labour	0.2(person)	0.20	人	12,150.00			2,430.00			Lab-21
Filled up ground materialは,現場発生材を使用する										
Bulldozer daily productivity=690m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/690=0.14(day)										
Corrected day =0.14/95%=0.15(day)										
Tire roller daily productivity=1330m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/1330=0.08(day)										
Corrected day =0.08/95%=0.08(day)										
Subtotal		100.00	m3				64,865.60			
Per Unit Price		1.00	m3				648.66	0.00	0	

00- 2 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient Simple

Item: Levelling & compacting soil Reference H24MLIT P36

Specification: Roadbed material, 10,000m3 below obstacle none,Borrow material 0.00 Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	15 t	0.20	日	272,216.00			54,443.20			OPE-14
Tire roller	8－20t	0.18	日	270,040.00			48,607.20			OPE-5
Unskilled Labour	0.3(person)	0.30	人	12,150.00			3,645.00			Lab-21
路床材	Sub grade material	133	m3	0.00			0.00			Mat-45
路床材として,H24MLITP13 表2.2土量の変化率の主要区分にて砂及びSandを想定する										
100m3 require amount =compcted amount (m3)/change rate of soil volume(C/L)=100/(0.9/1.2)=133(m3)										
Bulldozer daily productivity=540m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/540=0.19(day)										
Corrected day =0.19/95%=0.20(day)										
Tire roller daily productivity=580m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/580=0.17(day)										
Corrected day =0.17/95%=0.18(day)										
Subtotal		100.00	m3				106,695.40			
Per Unit Price		1.00	m3				1,066.95	0.00	0	

00-　3　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item:　Excavation　Reference　H24MLIT P20

Specification:　土砂(レキ質土･砂･Sand･粘性土) 人力併用機械掘削　obstacle none　Quantity･Unit:　100　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Backhoe	･Crawler typeFull bucket0.6m3 100/300/85%	0.39	日	304,207.27			119,296.97			OPE-13
Unskilled Labour	3.9(person)	3.90	人	12,150.00			47,385.00			Lab-21
Daily productivity =300(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/300=0.33(day)										
Subtotal		100.00	m3				166,681.97			
Per Unit Price		1.00	m3				1,666.82	0.00	0	

00- 4 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Excavation&Loading Reference H24MLIT P20

Specification: Loose sand_Backhoe･Full bucket0.6m3 Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Backhoe	Crawler type Full bucket0.6m3	0.38	日	304,207.27			115,448.68			OPE-13
Daily productivity =310(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/310=0.38(day)										
Subtotal		100.00	m3				115,448.68			
Per Unit Price		1.00	m3				1,154.49	0.00	0	

00- 5 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Pavement_Levelling Reference H24MLIT P495

Specification: Roadbed & subgrade Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.14(person)	0.14	person	12,150.00			1,701.00			Lab-21
Motor grader	3.1m	0.07	日	324,440.00			22,901.65			OPE-16
Road roller	10-12t	0.07	日	226,584.00			15,994.16			OPE-18
Tire roller	8-20t	0.07	日	270,040.00			19,061.65			OPE-5
Daily productivity =1,580m2/day										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/1,580=0.06(day)										
Subtotal		100.00	m2				59,658.46			
Per Unit Price		1.00	m2				596.58	0.00	0	

00-	6	Productivity correction coefficient: Asia	Labour coefficient	none	Machine coefficient	Simple

Item:	Pavement	Reference	H24MLIT P495
Specification:	Base course t=150mm	Quantity・Unit:	100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Base course material		19.05	m3	18,434.29			351,173.22			Mat-52
Motor grader	3.1m	0.11	日	324,440.00			34,386.86			OPE-16
Road roller	10-12t	0.11	日	226,584.00			24,015.26			OPE-18
Tire roller	8-20t	0.11	日	270,040.00			28,621.09			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,939.21		0	8,094.53		0	
100m2 requires Base course material amount =100m2×0.15m×(1+0.27)=19.05(m3)										
Maximun t of 1 layer =150mm, 1Layer total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110/85%1=0.11(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				449,206.96			
Per Unit Price		1.00	m2				4,492.07	0.00	0	

00- 7 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Pavement Reference H24MLIT P495

Specification: Subbase courset=150mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Subbase course material		19.05	m3	11,124.14			211,914.87			Mat-51
Motor grader	3.1m	0.11	日	324,440.00			34,386.86			OPE-16
Road roller	10-12t	0.11	日	226,584.00			24,015.26			OPE-18
Tire roller	8-20t	0.11	日	270,040.00			28,621.09			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,939.21		0	8,094.53		0	
100m2 requires Subbase course material amount =100m2×0.15m×(1+0.27)=19.05(m3)										
Maximun t of 1 layer =200mm, 1Layer total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110/85%=0.105(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				309,948.61			
Per Unit Price		1.00	m2				3,099.49	0.00	0	

00- 8 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Pavement Reference H24MLIT P500

Specification: Surface course t=50mmW>=3.0m, including tack coat Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870			1,119			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580			2,237			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150			3,729			Lab-21
Asphalt mix	Surface course, heated asphalt	5.99	m3	166,028			993,991			Mat-70
Bitumin material	Tack coat 4.3l=4.3kg	43.00	kg	630			27,090			Mat-68
Asphalt finisher	Wheel type 2.4-4.5m 1.0(day)×100/2,300/95%	0.05	日	511,816			26,180			OPE-1
Road roller	10-12t 1.0(day)×100/2,300/95%	0.05	日	226,584			11,590			OPE-18
Tire roller	8-20t 1.0(day)×100/2,300/95%	0.05	日	270,040			13,813			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*19%	0.19	-	58,668			11,147			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.05(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=5.99(m3)										
Subtotal		100.00	m2				1,090,895			
Per Unit Price		1.00	m2				10,909	0	0	

00-	9	Productivity correction coefficient: Asia	Labour coefficient	none	Machine coefficient	Simple

Item: Pavement Reference H24MLIT P500

Specification: Binder course t=50mm W>=3m, including prime coat Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870.00			1,118.67			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580.00			2,237.34			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150.00			3,728.90			Lab-21
Asphalt mix	Heated asphalt	5.99	m3	166,027.50			993,990.83			Mat-70
Bitumin material	Prime coat 126l=126kg	126	kg	630.00			79,380.00			Mat-68
Asphalt finisher	Wheel type 2.4-4.5m	0.05	日	511,816.00			24,085.46			OPE-1
Road roller	10-12t	0.05	日	226,584.00			10,662.78			OPE-18
Tire roller	8-20t	0.05	日	270,040.00			12,707.76			OPE-5
Miscellaneous cost	Subtotal of Labour, machine, and operation×19%	0.19	-	54,540.91			10,362.77			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.05(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=5.99(m3)										
Miscellaneous cost is for other sub-equipment etc										
Subtotal		100.00	m2				1,138,274.51			
Per Unit Price		1.00	m2				11,382.75	0.00	0	

00-　13　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item:　Demolition of existing structure　Reference　H24MLIT P571

Specification:　Remove asphalt pavement Excavetion/Loading t=>10cm　Quantity･Unit:　100　m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/560/85%	0.15	person	21,870.00			3,176.47			Lab-1
Unskilled Labour	2.0(person)×100/560/85%	0.29	person	12,150.00			3,529.41			Lab-21
Backhoe	･Crawler typeFull bucket0.35m3	0.15	日	195,797.38			28,438.25			OPE-12
daily productivity=810(m2/day)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/810/0.85=0.15(day)										
Subtotal		100.00	m2				35,144.13			
Per Unit Price		1.00	m2				351.44	0.00	0	

00-　14　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Demolition of existing structure Roadbed/Subbase　Reference　H24MLIT P20

Specification: Excavation for foundation_w/o cofferdam　Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	Excavation for foundation_w/o cofferdam	0.30	人	12,150.00			3,645.00			Lab-21
Backhoe	･Crawler typeFull bucket0.6m3	0.90	日	304,207.27			275,300.70			OPE-13
Subtotal		100.00	m3				278,945.70			
Per Unit Price		1.00	m3				2,789.46	0.00	0	

00- 15 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Cement stabilization Reference H24MLIT 52

Specification: by Backhoe Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 127 m2 / day * 0.75	95.25								
Foreman		1.05	person	21,870.00			22,960.63			Lab-1
Skilled Labour		1.05	person	14,580.00			15,307.09			Lab-20
Unskilled Labour		1.05	person	12,150.00			12,755.91			Lab-21
Backhoe	(Full bucket0.6m3)	1.05	day	304,207.27			319,377.71			OPE-13
Vibratory roller(Tamper type)	Hand guide type0.8～1.1t、60～80kg	1.05	day	54,320.00	0.00	0	57,028.87	(0.00)	0	ERN_22
Miscellaneous cost	Labour,Machineray Subtotal*7%	0.07		427,430.21			29,920.11			
Subtotal		100.00	m3				457,350.32			
Per Unit Price		1.00	m3				4,573.50	0.00	0	

00-　18　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item:　Cutting&Dozing　Reference　H24MLIT P20

Specification:　by bulldozer for loose soil(sand)　Quantity･Unit:　100　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	20t	0.37	日	366,357.09			134,690.11			OPE-15
Daily productivity =320(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/320=0.31(day)										
Subtotal		100.00	m3				134,690.11			
Per Unit Price		1.00	m3				1,346.90	0.00	0	

00- 19 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Shaping slope of embankment Reference H24MLIT P56

Specification: By machinery for Sand soil Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Forman		0.40	人	21,870.00			8,748.00			Lab-1
Unskilled labour		0.90	人	12,150.00			10,935.00			Lab-21
Backhoe	0.6m3	4.71	hr	48,496.82			228,220.31			OPE-36
Daily productivity * 85%										
4.00 hr/85%=4.71 hr										
Subtotal		100.00	m2				247,903.31			
Per Unit Price		1.00	m2				2,479.03	0.00	0	

00- 20 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Signboard Reference MLITH24 P539

Specification: Installation_with concrete foundation Quantity･Unit: 10 本

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	2 person x1.5	3.00	person	12,150.00			36,450.00			Lab-21
Concrete foundation	18N/mm3,V=2.3 x (1+0.045)	2.40	m3	79,885.80			192,005.52			Mat-55
Form work	Ordinal form for minor structure	18.00	m2	7,901.45			142,226.10			01-23
Material for leveling	Gravel, V=4.9x0.1	0.49	m3	41,850.00			20,506.50			Mat-47
Sign board and pole		10.00	nos	0.00			0.00			Mat-79
Subtotal		10.00	本				391,188.12			
Per Unit Price		1.00	本				39,118.81	0.00	0	

00- 21 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Road marking Reference H04MOC P438

Specification: b=45cm Quantity・Unit: 1,000 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.8(person)	1.80	person	21,870.00			39,366.00			Lab-1
Skilled Labour	3.6(person)	3.60	person	14,580.00			52,488.00			Lab-20
Unskilled Labour	7.1(person)	7.10	person	12,150.00			86,265.00			Lab-21
Paint	for road marking	1,700.00	kg	0.00			0.00			Mat-80
Glass Beads	JIS R3301	75.00	kg	0.00		35	0.00		10,125	Mat-134
Line marker	Hand guide type	14.82	hr	23,918.00			354,549.18			OPE-40
Cement Slurry Plant	200-350kg×2each	14.82	hr	9,389.00			139,178.12			OPE-25
Truck	3～3.5t Capacity	12.82	hr	62,618.00			802,983.76			OPE-34
Truck	3～3.5t Capacity	12.82	hr	62,893.00			806,510.24			OPE-34
Miscellaneous cost	Subtotal×7%	0.07	-	2,281,340.30			159,693.82			
1,000m requires amount =570(kg)										
1,000m requires glass beads amount =25(kg)										
Subtotal		1,000.00	m				2,441,034.12		10,125	
Per Unit Price		1.00	m				2,441.03	0.00	10	

OCG単価を入れた

00- 22 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Road marking Reference H04MOC P438

Specification: b=15cm Quantity・Unit: 1,000 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5(person)	0.50	person	21,870.00			10,935.00			Lab-1
Skilled Labour	1.1(person)	1.10	person	14,580.00			16,038.00			Lab-20
Unskilled Labour	2.1(person)	2.10	person	12,150.00			25,515.00			Lab-21
Paint	for road marking	570.00	kg	0.00			0.00			Mat-80
Glass Beads	JIS R3301	25.00	kg			135			3,375	Mat-134
Line marker	Hand guide type	4.35	hr	11,680.44			50,844.27			OPE-40
Cement Slurry Plant	200-350kg×2each	4.35	hr	35,302.64			153,670.32			OPE-25
Truck	3～3.5t Capacity	3.76	hr	52,720.76			198,478.16			OPE-34
Truck	3～3.5t Capacity	3.76	hr	52,720.76			198,478.16			OPE-34
Miscellaneous cost	Subtotal×7%	0.07	-	653,958.91			45,777.12			
1,000m requires amount =570(kg)										
1,000m requires glass beads amount =25(kg)										
Subtotal		1,000.00	m				699,736.03		3,375	
Per Unit Price		1.00	m				699.74	0.00	3	

00- 23 Productivity correction coefficient: Labour coefficient none Machine coefficient General

Item: Road marking Reference H04MOC P438

Specification: b=50cm Quantity・Unit: 1,000 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5(person) + 0.7	1.20	person	21,870.00			26,244.00			Lab-1
Skilled Labour	1.1(person) + 1.5	2.60	person	14,580.00			37,908.00			Lab-20
Unskilled Labour	2.1(person) + 3.0	5.10	person	12,150.00			61,965.00			Lab-21
Paint	for road marking	1,890.00	kg	0.00			0.00			Mat-80
Glass Beads	JIS R3301	83.00	kg			135			11,205	Mat-134
Line marker	Hand guide type	10.47	hr	11,680.44			122,301.08			OPE-40
Cement Slurry Plant	200-350kg×2each	10.47	hr	35,302.64			369,639.41			OPE-25
Truck	3～3.5t Capacity	9.06	hr	52,720.76			477,588.06			OPE-34
Truck	3～3.5t Capacity	9.06	hr	52,720.76			477,588.06			OPE-34
Miscellaneous cost	Subtotal×7%	0.07	-	1,573,233.61			110,126.35			
1,000m requires amount =570(kg)										
1,000m requires glass beads amount =25(kg)										
Subtotal		1,000.00	m				1,683,359.96		11,205	
Per Unit Price		1.00	m				1,683.36	0.00	11	

00- 24 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Temporary_Jetty Reference H28MLIT P292

Specification: Superstructure_Installation Quantity・Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.2 person * 2.5	3.00	person	44,100.00			132,300.00			Lab-2
Skilled Labour for Bridges	3.4 person *2.5	8.50	person	29,400.30			249,902.55			Lab-8
Welder			person	19,440.00			0.00			Lab-17
Unskilled Labour	2 prson *2.5	5.00	person	12,150.00			60,750.00			Lab-21
Crawler crane	100t hang	1.30	day	604,856.00			786,312.80			OPE-42
Barge	1500t	1.30	day	2,498,798.08	0.00	0	3,248,437.50	(0.00)	0	Mac-d(10)
Miscellaneous cost	Labour_Machine_Subtotal×9%	0.16	-	60,750.00		0	9,720.00		0	
*Material cost is separately counted										
Subtotal		10.00	t				4,487,422.85			
Per Unit Price		1.00	t				448,742.29	0.00	0	

00- 25 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Temporary_Jetty Reference H28MLIT P292

Specification: Deck pannel Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.9 person *2.5	2.25	人	21,870.00			49,207.50			Lab-1
Scaffolder	2.9 person *2.5	7.25	人	18,270.00			132,457.50			Lab-6
Unskilled Labour	1.1 person *2.5	2.75	人	12,150.00			33,412.50			Lab-21
Crawler crane	100t hang	1.00	day	604,856.00			604,856.00			OPE-42
Barge	1500t	1.00	day	2,498,798.08	0.00	0	2,498,798.08	(0.00)	0	Mac-d(10)
*Material cost is separately counted										
Subtotal		100.00	m2				3,318,731.58			
Per Unit Price		1.00	m2				33,187.32	0.00	0	

00-　26　Productivity correction coefficient: Asia　Labour coefficient　Simple　Machine coefficient　none

Item: Temporary_Jetty　Reference　H28MLIT P292

Specification: Guared rail installation　Quantity・Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0 person *1.5	1.50	person	21,870.00			32,805.00			Lab-1
Unskilled Labour	3.8 person *1.5	5.70	person	12,150.00			69,255.00			Lab-21
				324,440.00			0.00			
*Material cost is separately counted										
Subtotal		100.00	m				102,060.00			
Per Unit Price		1.00	m				1,020.60	0.00	0	

00- 27 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary_Jetty Reference H28MLIT P298

Specification: H400_L=40.7m_Pile_Driving_25m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 4 nos / day * 75%	3.00	nos/day							
Foreman	1 person * (10 nos / daily productivity)	3.33	person	21,870.00			72,900.00			Lab-1
Scaffolder	2 person * (10 nos / daily productivity)	6.67	person	18,270.00			121,800.00			Lab-6
Unskilled Labour	1 person * (10 nos / daily productivity)	3.33	person	12,150.00			40,500.00			Lab-21
Crawler crane	100t hang	3.33	day	604,856.00			2,016,186.67			OPE-42
Barge	1500t	3.33	day	2,498,798.08	0.00	0	8,329,326.92	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	3.33	day							OPE-22
Generator	250kVA	3.33	day	1,058,950.01			3,529,833.36			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	14,110,546.95	0.00	0	2,822,109.39	(0.00)	0	
*Material cost is separately counted										
Subtotal		10.00	nos				16,932,656.34			
Per Unit Price		1.00	nos				1,693,265.63	0.00	0	

00- 28 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Temporary_Jetty Reference H28MLIT P296

Specification: Falswork_Installation(Guide, Frame, Wale, Strut) Quantity・Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	2.1 person *2.5	5.25	人	44,100.00			231,525.00			Lab-2
Skilled Labour for Bridges	3.9 person *2.5	9.75	人	29,400.30			286,652.93			Lab-8
Welder	3.2 person *2.5	8.00	人	19,440.00			155,520.00			Lab-17
Unskilled Labour	2.6 person *2.5	6.50	人	12,150.00			78,975.00			Lab-21
Crawler crane	100t hang	1.90	day	604,856.00			1,149,226.40			OPE-42
Barge	1500t	1.90	day	2,498,798.08	0.00	0	4,747,716.35	(0.00)	0	Mac-d(10)
Miscellaneous cost	Subtotal×28%	0.28	-	752,672.93			210,748.42			
*Material cost is separately counted										
Subtotal		10.00	t				6,860,364.10			
Per Unit Price		1.00	t				686,036.41	0.00	0	

00- 29 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)install_Driving_below13m H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/14 nos/day* 75%=0.952	0.952								
Foreman	1person*0.78	0.952	人	21,870.00			20,828.57			Lab-1
Scaffolder	2person*0.78	1.905	人	18,270.00			34,800.00			Lab-6
Unskilled Labour	1person*0.78	0.952	人	12,150.00			11,571.43			Lab-21
Crawler crane	100t hang	0.952	day	604,856.00			576,053.33			OPE-42
Barge	1500t	0.952	day	2,498,798.08	0.00	0	2,379,807.69	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.95	day							OPE-22
Generator	250kVA	0.95	day	1,058,950.01			1,008,523.82			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	4,031,584.84	0.00	0	806,316.97	(0.00)	0	
Material cost is included into "Miscellaneous cost of Guide frame"										
Subtotal		10.00	nos				4,837,901.81			
Per Unit Price		1.00	nos				483,790.18	0.00	0	

00- 30 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Frame)Install / Remove Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.45 person *2.5	1.13	人	21,870.00			24,603.75			Lab-1
Scaffolder	1.23 person *2.5	3.08	人	18,270.00			56,180.25			Lab-6
Unskilled Labour	0.52 person *2.5	1.30	人	12,150.00			15,795.00			Lab-21
Crawler crane	100t hang	0.65	day	604,856.00			393,156.40			OPE-42
Barge	1500t	0.65	day	2,498,798.08	0.00	0	1,624,218.75	(0.00)	0	Mac-d(10)
Miscellaneous cost	Labour cost Subtotal×10%	0.10	-	96,579.00			9,657.90			
Material cost is included into "Miscellaneous cost"										
Subtotal		10.00	nos				2,123,612.05			
Per Unit Price		1.00	nos				212,361.21	0.00	0	

00- 31 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)Pulling_below13m H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/(26 nos/day * 75%)	0.51								
Foreman	1person*0.44	0.51	人	21,870.00			11,215.38			Lab-1
Scaffolder	2person*0.44	1.03	人	18,270.00			18,738.46			Lab-6
Unskilled Labour	1person*0.44	0.51	人	12,150.00			6,230.77			Lab-21
Crawler crane	100t hang	0.51	day	604,856.00			310,182.56			OPE-42
Barge	1500t	0.51	day	2,498,798.08	0.00	0	1,281,434.91	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.51	day							OPE-22
Generator	250kVA	0.51	day	1,058,950.01			543,051.29			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	2,170,853.37	0.00	0	434,170.67	(0.00)	0	
Subtotal		10.00	nos				2,605,024.04			
Per Unit Price		1.00	nos				260,502.40	0.00	0	

00- 32 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Levelling & compacting soil Reference H24MLIT P36

Specification: Filled up ground10,000m3 below obstacle none,Borrow material 0.00 Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	15 t	0.15	day	272,216.00			40,832.40			OPE-14
Tire roller	8－20t	0.08	day	270,040.00			21,603.20			OPE-5
Unskilled Labour	0.2(person)	0.20	person	12,150.00			2,430.00			Lab-21
Sand		133	m3	12,713.30			1,695,064.29			Mat-49
100m3 require amount =compcted amount (m3)/change rate of soil volume(C/L)=100/(0.9/1.2)=133(m3)										
Bulldozer daily productivity=690m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/690=0.14(day)										
Corrected day =0.14/95%=0.15(day)										
Tire roller daily productivity=1330m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/1330=0.08(day)										
Corrected day =0.08/95%=0.08(day)										
Subtotal		100.00	m3				1,759,929.89			
Per Unit Price		1.00	m3				17,599.30	0.00	0	

00- 33 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Sodding Reference H24MLIT P966

Specification: on slope Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.2(person)×1.5	0.30	person	21,870.00			6,561.00			Labour-1
Skilled labour	1.1(person)×1.5	1.65	person	18,270.00			30,145.50			Labour-6
Unskilled Labour	2.3(person)×1.5	3.45	person	12,150.00			41,917.50			Lab-21
Turf	Turf	100.00	m2	0.00			0.00			Mat-43
Sand	Sand	2.70	m3	12,713.30			34,325.91			Mat-49
Miscellaneous cost	Labour cost Subtotal ×5%	0.05	-	78,624.00		0	3,931.20		0	
Subtotal		100.00	m2				116,881.11			
Per Unit Price		1.00	m2				1,168.81	0.00	0	

00- 34 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: t=250mm,CBR>20%,2 layer Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Road base material	CBR>20%	31.8	m3	41,850.00			1,328,737.50			Mat-47
Motor grader	3.1m	0.19	day	324,440.00			61,472.84			OPE-16
Road roller	10-12t	0.19	day	226,584.00			42,931.71			OPE-18
Tire roller	8-20t	0.19	day	270,040.00			51,165.47			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	161,402.02			14,526.18			
100m2 requires Road base material amount =100m2×0.25m×(1+0.27)=31.8(m3)										
Maximum tickness of 1 layer =200mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110×2=0.18(day)										
Corrected day =0.18/95%=0.19(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				1,504,665.70			
Per Unit Price		1.00	m2				15,046.66	0.00	0	

00- 35

Labour coefficient none

Machine coefficient Simple

Item: Road base

Reference H24MLIT P495

Specification: Crush stone Road base t=100mm

Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Base course material		12.70	m3	18,434.29			234,115.48			Mat-52
Motor grader	3.1m	0.09	day	324,440.00			30,767.19			OPE-16
Road roller	10-12t	0.09	day	226,584.00			21,487.34			OPE-18
Tire roller	8-20t	0.09	day	270,040.00			25,608.35			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	80,778.88		0	7,270.10		0	
100m2 requires Base course material amount =100m2×0.10m×(1+0.27)=12.7(m3)										
Maximun t of 1 layer =150mm, 1Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110×1=0.09(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				322,164.46			
Per Unit Price		1.00	m2				3,221.64	0.00	0	

00-　36　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Excavation　Reference　H24MLIT P20

Specification: Excavation for foundation　0.00　Quantity･Unit:　100　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Backhoe	･Crawler typeFull bucket0.6m3	0.53	day	304,207.27			161,050.91			OPE-13
daily productivity=220(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/220=0.45(day)										
Subtotal		100.00	m3				161,050.91			
Per Unit Price		1.00	m3				1,610.51	0.00	0	

00- 37 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Cutting & Trimming slope Reference H24MLIT P56

Specification: by machinery for loose soil(sand) Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.6(person)	0.60	person	21,870.00			13,122.00			Lab-1
Unskilled Labour	1.4(person)	1.40	person	12,150.00			17,010.00			Lab-21
Backhoe	･Crawler typeFull bucket0.6m3	4.71	hr	48,496.82			228,220.31			運転-3
100m2 requires operation hr of backhoe=4.0(hr)										
Subtotal		100.00	m2				258,352.31			
Per Unit Price		1.00	m2				2,583.52	0.00	0	

00- 40 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_A1 Reference H28MLIT 141

Specification: RCD pile ϕ 1500_L=53.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.3 days/nos / 0.75 = 3.067 day/nos	3.067								
Foreman	1* Days/nos * 1 person	3.07	person	21,870.00			67,075.29			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.07	person	14,580.00			44,716.86			Lab-20
Scaffolder	1* Days/nos * 2 person	6.13	person	18,270.00			112,068.18			Lab-6
Unskilled Labour	1* Days/nos * 2 person	6.13	person	12,150.00			74,528.10			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	4.63	day	53,298	227		246,832	1,053		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	3.70	day	670,516			2,484,221			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.04	day	297,147	0		902,237	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.09	day	297,147	0		619,718	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	2.67	day	195,797			523,645			OPE-12
Generator	125/150kVA	4.63	day	553,278			2,562,325			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 1.5m^2 * 53.0 m * (1+0.12)	104.90	m3	92,558	0	0	9,709,160	0	0	02-223
Rebar work_SD345	Arranging D13	0.014	ton	126,764	0.0	78,422	1,775	0.00	1,098	00-79
Rebar work_SD345	Arranging D16-D25	5.177	ton	114,348	0.0	81,271	591,977	0.00	420,740	00-80
Rebar work_SD345	Arranging D29-D32	3.105	ton	80,841	0.0	83,080	251,010	0.00	257,963	00-81
Rebar work_SD345	Assembling D13	0.014	ton	154,137	0.0	0	2,158	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.177	nos	128,135	0.0	0	663,353	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	3.105	ton	78,633	0.0	0	244,155	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	131.12	m3	7,754	0.0	0	1,016,680	0	0	00-74
Miscellaneous cost	31%	0.31		5,075,042	1,053	0	1,573,263	326	0	
Total nos										
Subtotal		1.00	nos				21,690,896	1,378.92	679,801	
Per Unit Price		1.00	nos				21,690,896	1,378.92	679,801	

00- 41 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P1 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=58.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870.00			79,891.11			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580.00			53,260.74			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270.00			133,480.62			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150.00			88,767.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 58.0m * (1+0.12)	204.08	m3	92,558	0	0	18,889,100	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.155	ton	114,348	0.0	81,271	589,462	0.00	418,952	00-80
Rebar work_SD345	Arranging D29-D32	11.116	ton	80,841	0.0	83,080	898,624	0.00	923,517	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.155	nos	128,135	0.0	0	660,534	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	11.116	ton	78,633	0.0	0	874,082	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	255.10	m3	7,754	0.0	0	1,977,943	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				34,868,078	1,642.39	1,344,665	
Per Unit Price		1.00	nos				34,868,078	1,642.39	1,344,665	

00- 42 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P2 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=62.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 60-70m	= 3.16 days/nos / 0.75 = 4.213 day/nos	4.213								
Foreman	1* Days/nos * 1 person	4.21	person	21,870.00			92,138.31			Lab-1
Skilled Labour	1* Days/nos * 1 person	4.21	person	14,580.00			61,425.54			Lab-20
Scaffolder	1* Days/nos * 2 person	8.43	person	18,270.00			153,943.02			Lab-6
Unskilled Labour	1* Days/nos * 2 person	8.43	person	12,150.00			102,375.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	6.36	day	53,298	227		339,062	1,446		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	5.09	day	670,516			3,412,462			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	4.17	day	297,147	0		1,239,362	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.86	day	297,147	0		851,279	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.67	day	195,797			719,308			OPE-12
Generator	125/150kVA	6.36	day	553,278			3,519,750			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 62.0m * (1+0.12)	218.15	m3	92,558	0	0	20,191,796	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.155	ton	114,348	0.0	81,271	589,462	0.00	418,952	00-80
Rebar work_SD345	Arranging D29-D32	11.116	ton	80,841	0.0	83,080	898,624	0.00	923,517	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.155	nos	128,135	0.0	0	660,534	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	11.116	ton	78,633	0.0	0	874,082	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	272.69	m3	7,754	0.0	0	2,114,353	0	0	00-74
Miscellaneous cost	31%	0.31		6,971,356	1,446	0	2,161,121	448	0	
Total nos										
Subtotal		1.00	nos				37,988,942.65	1,894.16	1,344,665	
Per Unit Price		1.00	nos				37,988,942.65	1,894.16	1,344,665	

00-	43	Productivity correction coefficient: Asia	Labour coefficient	depending on machine coefficient	Machine coefficient	General

Item: Pile Cast in Site_P3 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=57.0m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870.00			79,891.11			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580.00			53,260.74			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270.00			133,480.62			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150.00			88,767.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 57.0m * (1+0.12)	200.56	m3	92,558	0	0	18,563,426	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.457	ton	114,348	0.0	81,271	623,995	0.00	443,496	00-80
Rebar work_SD345	Arranging D29-D32	11.559	ton	80,841	0.0	83,080	934,436	0.00	960,322	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.457	nos	128,135	0.0	0	699,230	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	11.559	ton	78,633	0.0	0	908,916	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	250.70	m3	7,754	0.0	0	1,943,841	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				34,652,177.76	1,642.39	1,406,014	
Per Unit Price		1.00	nos				34,652,177.76	1,642.39	1,406,014	

00- 44 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P4 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=57.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870.00			79,891.11			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580.00			53,260.74			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270.00			133,480.62			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150.00			88,767.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 57.5m * (1+0.12)	202.32	m3	92,558	0	0	18,726,263	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.158	ton	114,348	0.0	81,271	589,805	0.00	419,196	00-80
Rebar work_SD345	Arranging D29-D32	4.510	ton	80,841	0.0	83,080	364,591	0.00	374,691	00-81
Rebar work_SD345	Arranging D35	8.261	ton	126,764	0	80,321	1,047,193	0.00	663,532	00-225
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.158	nos	128,135	0.0	0	660,918	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	4.510	ton	78,633	0.0	0	354,634	0.00	0	00-84
Rebar work_SD345	Assembling D35	826%	ton	154,137	0.0	0	1,273,325	0	0	00-229
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Transportation and Disporsal fee	for disposal site including disposal fee	252.90	m3	7,754	0.0	0	1,960,892	0	0	00-74
Subtotal		1.00	nos				35,955,954.88	1,642.39	1,459,615	
Per Unit Price		1.00	nos				35,955,954.88	1,642.39	1,459,615	

00- 45 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P5 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=55.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870.00			79,891			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580.00			53,261			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270.00			133,481			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150.00			88,768			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	(1,253.73)		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624			OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126			OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 55.5m * (1+0.12)	195.28	m3	92,558	0	0	18,074,914	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	4.915	ton	114,348	0.0	81,271	562,018	0.00	399,447	00-80
Rebar work_SD345	Arranging D29-D32	9.583	ton	80,841	0.0	83,080	774,695	0.00	796,156	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	4.915	nos	128,135	0.0	0	629,781	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	9.583	ton	78,633	0.0	0	753,538	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	244.10	m3	7,754	0.0	0	1,892,687	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				33,665,968	1,642.39	1,197,799	
Per Unit Price		1.00	nos				33,665,968	1,642.39	1,197,799	

00- 46 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_AO1 Reference H28MLIT 141

Specification: RCD pile ϕ 1500_L=56.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.3 days/nos / 0.75 = 3.067 day/nos	3.067								
Foreman	1* Days/nos * 1 person	3.07	person	21,870			67,075			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.07	person	14,580			44,717			Lab-20
Scaffolder	1* Days/nos * 2 person	6.13	person	18,270			112,068			Lab-6
Unskilled Labour	1* Days/nos * 2 person	6.13	person	12,150			74,528			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	4.63	day	53,298	227		246,832	1,053		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	3.70	day	670,516			2,484,221			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.04	day	297,147	0		902,237	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.09	day	297,147	0		619,718	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	2.67	day	195,797			523,645			OPE-12
Generator	125/150kVA	4.63	day	553,278			2,562,325			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 1.5m^2 * 56.5 m * (1+0.12)	111.82	m3	92,558	0	0	10,350,331	0	0	02-223
Rebar work_SD345	Arranging D13	0.014	ton	126,764	0	78,422	1,775	0	1,098	00-79
Rebar work_SD345	Arranging D16-D25	5.177	ton	114,348	0	81,271	591,977	0	420,740	00-80
Rebar work_SD345	Arranging D29-D32	3.105	ton	80,841	0	83,080	251,010	0	257,963	00-81
Rebar work_SD345	Assembling D13	0.014	ton	154,137	0	0	2,158	0	0	00-82
Rebar work_SD345	Assembling D16-D25	5.177	nos	128,135	0	0	663,353	0	0	00-83
Rebar work_SD345	Assembling D29-D32	3.105	ton	78,633	0	0	244,155	0	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	139.78	m3	7,754	0	0	1,083,819	0	0	00-74
Miscellaneous cost	31%	0.31		5,075,042	1,053	0	1,573,263	326	0	
Total nos										
Subtotal		1.00	nos				22,399,207	1,379	679,801	
Per Unit Price		1.00	nos				22,399,207	1,379	679,801	

00- 47 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P01 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=57.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870			79,891			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580			53,261			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270			133,481			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150			88,768			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 57.0m * (1+0.12)	200.56	m3	92,558	0	0	18,563,426	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0	78,422	3,549	0	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.057	ton	114,348	0	81,271	578,256	0	410,987	00-80
Rebar work_SD345	Arranging D29-D32	11.953	ton	80,841	0	83,080	966,287	0	993,055	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0	0	4,316	0	0	00-82
Rebar work_SD345	Assembling D16-D25	5.057	nos	128,135	0	0	647,977	0	0	00-83
Rebar work_SD345	Assembling D29-D32	11.953	ton	78,633	0	0	939,898	0	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	250.70	m3	7,754	0	0	1,943,841	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				34,618,017	1,642	1,406,238	
Per Unit Price		1.00	nos				34,618,017	1,642	1,406,238	

00- 48 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_PO2 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=57.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870			79,891			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580			53,261			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270			133,481			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150			88,768			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 57.5m * (1+0.12)	202.32	m3	92,558	0	0	18,726,263	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0	78,422	3,549	0	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.068	ton	114,348	0	81,271	579,513	0	411,881	00-80
Rebar work_SD345	Arranging D29-D32	9.805	ton	80,841	0	83,080	792,642	0	814,599	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0	0	4,316	0	0	00-82
Rebar work_SD345	Assembling D16-D25	5.068	nos	128,135	0	0	649,386	0	0	00-83
Rebar work_SD345	Assembling D29-D32	9.805	ton	78,633	0	0	770,994	0	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	252.90	m3	7,754	0	0	1,960,892	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				34,458,024	1,642	1,228,676	
Per Unit Price		1.00	nos				34,458,024	1,642	1,228,676	

00- 49 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_PO3 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=58.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 50-60m	= 2.74 day/nos / 0.75 = 3.653 day/nos	3.653								
Foreman	1* Days/nos * 1 person	3.65	person	21,870.00			79,891.11			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.65	person	14,580.00			53,260.74			Lab-20
Scaffolder	1* Days/nos * 2 person	7.31	person	18,270.00			133,480.62			Lab-6
Unskilled Labour	1* Days/nos * 2 person	7.31	person	12,150.00			88,767.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	5.52	day	53,298	227		293,993	1,254		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	4.41	day	670,516			2,958,871			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.62	day	297,147	0		1,074,624	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.48	day	297,147	0		738,126	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	3.19	day	195,797			623,696			OPE-12
Generator	125/150kVA	5.52	day	553,278			3,051,898			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 58.0m * (1+0.12)	204.08	m3	92,558	0	0	18,889,100	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	5.068	ton	114,348	0.0	81,271	579,513	0.00	411,881	00-80
Rebar work_SD345	Arranging D29-D32	9.860	ton	80,841	0.0	83,080	797,088	0.00	819,169	00-81
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	5.068	nos	128,135	0.0	0	649,386	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	9.860	ton	78,633	0.0	0	775,319	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	255.10	m3	7,754	0.0	0	1,977,943	0	0	00-74
Miscellaneous cost	31%	0.31		6,044,710	1,254	0	1,873,860	389	0	
Total nos										
Subtotal		1.00	nos				34,646,683.59	1,642.39	1,233,246	
Per Unit Price		1.00	nos				34,646,683.59	1,642.39	1,233,246	

00- 50 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Pile cap_on River Reference JICA study team

Specification: Class D Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity		320.00	m3/day							
Labour										
Foreman	0.14*1.5	0.21	person	21,870.00			4,592.70			Lab-1
Skilled Labour	0.4*1.5	0.60	person	14,580.00			8,748.00			Lab-20
Unskilled Labour	0.54*1.5	0.81	person	12,150.00			9,841.50			Lab-21
Machinery										
Crawler crane	100t hang	0.03	day	604,856.00			18,901.75			OPE-42
Barge	1500t	0.03	day	2,498,798.08	0.00	0	78,087.44	(0.00)	0	Mac-d(10)
Concrete bucket	5.0 m3 *2 nos	0.06	day	109,945.50	0.00		6,871.59	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 6 nos	0.19	day	171,633.30			32,181.24			OPE-71
Barge 2 nos	500t	0.06	day	969,771.63	0.00	0	60,610.73	(0.00)	0	Mac-d(21)
Miscellaneous cost										
Subtotal of Labour cost, depreciation and operation cost of machine 1.0% is counted		0.01	-	42,083.95	0.00	0	420.84	0.00	0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class D	10.45	m3	80,122.96	0.00	0	837,285	0	0	02-224
Subtotal		10.00	m3				1,057,541			
Per Unit Price		1.00	m3				105,754	0	0	

00- 51 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Concrete work Reference H24MLIT 288

Specification: 24N/mm2 Ordinal curing, reinforced concrete, 10m3 over 300m3 below Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.14 (person) x2.5	0.35	person	21,870.00			7,654.50			Lab-1
Skilled Labour	0.4 (person) x2.5	1.00	person	14,580.00			14,580.00			Lab-20
Unskilled Labour	0.54 (person) x2.5	1.35	person	12,150.00			16,402.50			Lab-21
Machinery										
Concrete pump car	1.03 (hr)	1.03	hr	109,945.50			113,243.87			OPE-32
90-110m3/hr										
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	151,880.87		0	1,518.81		0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class D	10.45	m3	80,122.96	0.00	0.00	837,284.93	0.00	0	02-224
Curing	Ordinal curing (Reinforced concrete)	10.00	m3	387.83			3,878.30			01-02
10m3 requires actual amount =10(m3)×(1+0.045)=10.45(m3)										
Subtotal		10.00	m3				994,562.91			
Per Unit Price		1.00	m3				99,456.29	0.00	0	

00- 52 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Concrete work(1) Reference H24MLIT 288

Specification: 18N/mm2 (Ordinal curing, Plain concrete structure over 300m3 below) Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.14 (person) x2.5	0.35	person	21,870.00			7,654.50			Lab-1
Skilled Labour	0.4 (person) x2.5	1.00	person	14,580.00			14,580.00			Lab-20
Unskilled Labour	0.54 (person) x2.5	1.35	person	12,150.00			16,402.50			Lab-21
Machinery										
Concrete pump car	1.03 (hr)	1.03	hr	109,945.50			113,243.87			OPE-32
90-110m3/hr										
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	151,880.87		0	1,518.81		0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class E	10.65	m3	74,380.08	0.00	0	792,147.85	(0.00)	0	02-225
Curing	Ordinal curing (Plain concrete)	10.00	m3	639.70			6,397.00			01-01
10m3 requires actual amount =10(m3)×(1+0.065)=10.65(m3)										
Subtotal		10.00	m3				951,944.53			
Per Unit Price		1.00	m3				95,194.45	0.00	0	

00- 54 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Concrete work Reference H24MLIT P288

Specification: 18N/mm2,Ordinal curing, Plain concrete structure Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.9(person)×1.5	1.35	person	21,870.00			29,524.50			Lab-1
Skilled Labour	1.02(person)×1.5	1.53	person	14,580.00			22,307.40			Lab-20
Unskilled Labour	3.25(person)×1.5	4.88	person	12,150.00			59,231.25			Lab-21
Concrete	Class E	10.65	m3	74,380.08	0.00	0	792,147.85	(0.00)	0	02-225
Crawler crane	50～55t hang	0.56	day	297,147.20	0.00		166,402.43	(0.00)		OPE-26
Curing	Ordinal curing (Plain concrete)	10.00	m3	639.70	0.00	0	6,397.00	0.00	0	01-01
Miscellaneous cost	Subtoal of Labour cost and machine cost ×4%	0.04	-	277,465.58		0	11,098.62		0	
10m3 requires actual amount =10(m3)×(1+0.065)=10.65(m3)										
Miscellaneous cost is for depreciation cost of vibrators, backet and electricity										
Subtotal		10.00	m3				1,087,109.05			
Per Unit Price		1.00	m3				108,710.91	0.00	0	

00- 56 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Concrete work for Pier(2)_On land Reference H28MLIT 735

Specification: Class C I 0.00 Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.06x1.5	0.09	person	21,870.00			1,968.30			Lab-1
Skilled Labour	0.18x1.5	0.27	person	14,580.00			3,936.60			Lab-20
Unskilled Labour	0.24x1.5	0.36	person	12,150.00			4,374.00			Lab-21
Miscellaneous cost	4%	0.04	-	10,278.90	0.00	0	411	0	0	
Machinery										
Concrete pump car	0.06x/1 (day)	0.06	day	855,000	0	0	51,300	0	0	ERN_3
90-110m3/hr										
Miscellaneous cost	4%	0.04	-	51,300.00	0.00	0	2,052	0	0	
*for concrete pump only										
Material	Loss amount is counted									
Concrete	Class C I	10.60	m3	85,496.90	0.00	0.00	906,267	0	0	02-222
Subtotal		10.00	m3				970,309			
Per Unit Price		1.00	m3				97,031	0	0	

00- 57 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide Reference H28MLIT P228

Specification: Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer Quantity・Unit: 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party		= 10 nos / 16 nos/day	0.625								
Foreman		1 person* daily productivity * 2.5 * party	3.125	person	21,870.00			68,343.75			Lab-1
Scaffolder		2 person* daily productivity * 2.5 * party	6.250	person	18,270.00			114,187.50			Lab-6
Unskilled Labour		1 person* daily productivity * 2.5 * party	3.125	person	12,150.00			37,968.75			Lab-21
350t CC			0.313	day	82,236.00	6,133.59		25,698.75	1,916.75		OPE-48
Vibratory Hammer224kW			0.313	day	204,309.00	864.29		63,846.56	(270.09)		OPE-59
4000t Barge			0.313	day	0.00	4,668.02	0	0.00	1,458.76	0	Mac-d(17)
275t CC			0.313	day	70,476.00	4,793.48		22,023.75	1,497.96		OPE-47
Vibratory Hammer224kW			0.313	day	204,309.00	864.29		63,846.56	(270.09)		OPE-59
3000t Barge			0.313	day	0.00	3,646.89	0	0.00	1,139.65	0	Mac-d(18)
Tag boat	3000PS_330GT	1*0.625	0.625	day	4,210,954.43			2,631,846.52			OPE-62
Transportation	300t(105 nos/time)	1*0.625		day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day		day							OPE-68
Miscellaneous cost		2%	0.02		3,027,762.14	6,553.30	0	60,555.24	131.07	0	
Material	L=26.5m(2.46nos/t)	H-300×300×10×15	24.600	t	0.00	0.00	64,800	0.00	0.00	1,594,080	Mat-176
Depreciation			(0.70)		0.00	0.00	1,594,080	0.00	0.00	-1,115,856	
Subtotal			10.00	nos				3,088,317.38	6,684.37	478,224	
Per Unit Price			1.00	nos				308,832	668.44	47,822	

00- 58 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide Reference H28MLIT P269

Specification: Guide(Frame)Falswork_Install Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party										
Foreman	1.7 person* 2.5 * party	8.5	person	21,870.00			185,895.00			Lab-1
Scaffolder	3.2 person* 2.5 * party	16.0	person	18,270.00			292,320.00			Lab-6
Unskilled Labour	1.7 person* 2.5 * party	8.5	person	12,150.00			103,275.00			Lab-21
Welder	1.7 person* 2.5 * party	8.5	person	19,440.00			165,240.00			Lab-17
Miscellaneous cost	LabourSubtotal x 4%	0.04	-	746,730.00		0	29,869.20		0	
350t CC		1.000	day	0.00	6,133.59	0	0.00	(6,133.59)	0	Mac-d(16)
4000t Barge		1.000	day	0.00	4,668.02	0	0.00	(4,668.02)	0	Mac-d(17)
275t CC		1.000	day	0.00	4,793.48	0	0.00	(4,793.48)	0	Mac-d(15)
3000t Barge		1.000	day	0.00	3,646.89	0	0.00	(3,646.89)	0	Mac-d(18)
Transportation 300 ton			day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat 350PS_30GT	0.033 day		day							Mac-d(42)
Guide frame_Scaffolding	Cable stayed bridge	10.000	t	0.00	0.00	66,563	0.00	0.00	665,628	02-235
Depreciation		(0.70)		0.00	0.00	665,628	0.00	0.00	-465,940	
Subtotal		10.00	t				776,599.20	19,241.98	199,688	
Per Unit Price		1.00	t				77,659.92	1,924.20	19,969	

00-　59　　Productivity correction coefficient: Asia　　Labour coefficient　　Machine coefficient

Item: Steel Pipe Sheet Pile Driving　　Reference

Specification: Cable stayed bridge(350 t CC & 275 t CC)　　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Exterior)	152.0	nos	971,180	25,538	0	147,619,349	3,881,706	0	01-15
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Bulkhead)	32.0	nos	982,450	27,800	0	31,438,398	889,612	0	01-27
Transportation barge 1200t(10 nos/time)	30 days * 16 months = 480 days	480.0	days	2,498,798	0	0	1,199,423,077	0	0	Mac-d(10)
Tag boat 1000PS_90GT			days	counted depending on duration on "General temp. work cost"						
*Depreciation base cost counted acoording to construction schedule										
Subtotal		1.00	LS				1,378,480,824	4,771,319		
Per Unit Price		1.00	LS				1,378,480,824	4,771,319	0	

00- 60 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Material cost Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	3,450.072	t		761.76			###########		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)	73.243	t		248.58			(18,206.74)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)	109.864	t		165.69			(18,203.37)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	0.000	t		788.94			0.00		Mat-268
Φ1,200	SKY490_t=14	618.408	t		850.32					Mat-269
Φ1,200	SKY490_t=16	1,083.440	t		877.50			(950,718.60)		Mat-270
φ=165.2, t =11mm, STK400		1,040.356	t		1,648.53			1,715,058.08		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	14.720	ton		3,431.25			(50,508.00)		Mat-272
(2) Welding Material	PL T=14 mm	2.208	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	9.568	ton		3,223.53			30,842.74		Mat-275
(4) Welded End Plate	PL T=12 mm	376	no		12.42			4,669.92		Mat-276
(5) Nonweld Interlocking Range		376	no		135.00			50,760.00		Mat-277
Depreciation	10%	(0.10)		0.00	5,467,094.30	0.00	0	(546,709)	0	
Subtotal		1.00	LS					4,920,384.87		
Per Unit Price		1.00	LS				0.00	4,920,384.87	0	

00-　61　Productivity correction coefficient:　Labour coefficient　none　Machine coefficient　General

Item:　Excavation inside of the pipe pile　Reference　H28MLIT　192

Specification:　Quantity･Unit:　10　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	53m3 * 0.75	39.75	m3/day							
Foreman		0.19	person	21,870.00			4,155.30			Lab-1
Unskilled Labour		0.74	person	12,150.00			8,991.00			Lab-21
Crawler crane	50～55t hang	0.53	day	297,147.20	0.00		158,478.51	(0.00)		OPE-26
Barge	800t	0.53	day	1,388,221.15	0.00	0	740,384.62	(0.00)	0	Mac-d(20)
Miscellaneous cost	14%	0.14		13,146.30			1,840.48			
*Hanmer grab operation fee is included into Crane operation fee										
Subtotal		10.00	m3				913,849.91			
Per Unit Price		1.00	m3				91,384.99	0.00	0	

00- 62 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Concrete Filling to Steel Pipe Reference JICA study team

Specification: Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	125m3 * 0.75	93.75	m3/day							
Foreman	0.9 person / 75 %	0.11	peraaon	21,870.00			2,332.80			Lab-1
Skilled Labour	0.2 person / 75 %	0.27	peraaon	14,580.00			3,888.00			Lab-20
Unskilled Labour	0.27 person / 75 %	0.36	peraaon	12,150.00			4,374.00			Lab-21
Concrete bucket	5.0 m3 *2 nos	0.21	day	109,945.50	0.00		23,455.04	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 3 nos	0.32	day	171,633.30			54,922.66			OPE-71
Barge 1 nos	500t	0.11	day	969,771.63	0.00	0	103,442.31	(0.00)	0	Mac-d(21)
Crawler crane	50～55t hang	0.11	day	297,147.20	0.00		31,695.70	(0.00)		OPE-26
Barge	800t	0.11	day	1,388,221.15	0.00	0	148,076.92	(0.00)	0	Mac-d(20)
Concrete	Class E	10.60	m3	74,380.08	0.00	0	788,428.85	(0.00)	0	02-225
*10 m3 / 93.75 m3 = 0.11 day										
Subtotal		10.00	m3				1,160,616.28			
Per Unit Price		1.00	m3				116,061.63	0.00	0	

00- 63 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Cleaning of Inside joint pipe Reference H28MLIT 193

Specification: Quantity･Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.40	peraaon	21,870.00			8,748.00			Lab-1
Skilled Labour		1.20	peraaon	14,580.00			17,496.00			Lab-20
Unskilled Labour		1.30	peraaon	12,150.00			15,795.00			Lab-21
Water jet	for Piling(14.7MPa-325l/min)	0.40	day	60,192.00	356.10		24,076.80	(142.44)		OPE-69
Miscellaneous cost	12%	0.12		42,039.00			5,044.68			
Crawler crane	50～55t hang	0.40	day	297,147.20	0.00		118,858.88	(0.00)		OPE-26
Barge	800t	0.40	day	1,388,221.15	0.00	0	555,288.46	(0.00)	0	Mac-d(20)
Subtotal		100.00	m				745,307.82	142.44		
Per Unit Price		1.00	m				7,453.08	1.42	0	

00- 64 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Mortar filling of Inside joint pipe Reference H28MLIT 193

Specification: Quantity・Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.40	person	21,870.00			8,748.00			Lab-1
Skilled Labour		1.00	person	14,580.00			14,580.00			Lab-20
Unskilled Labour		0.80	person	12,150.00			9,720.00			Lab-21
Generator	50/60kVA	0.50	day	269,972.22			134,986.11			OPE-51
Miscellaneous cost	Labour × 12%	0.12	-	33,048.00			3,965.76			
Mortar P-P type _φ165.2	2.5 m3 * 1.05	2.625	m3	66,186.00	0.00	3,924	173,738.25	(0.00)	10,301	02-226
Subtotal		100.00	m				345,738.12		10,301	
Per Unit Price		1.00	m				3,457.38	0.00	103	

00- 65 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Sealing of Inside joint pipe Reference H28MLIT 193

Specification: P-P_type Quantity・Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.50	person	21,870.00			10,935.00			Lab-1
Skilled Labour		1.40	person	14,580.00			20,412.00			Lab-20
Unskilled Labour		1.00	person	12,150.00			12,150.00			Lab-21
Generator	50/60kVA	0.50	day	269,972.22			134,986.11			OPE-51
Miscellaneous cost	Labour × 16%	0.16	-	43,497.00			6,959.52			
Mortar P-P type _φ165.2	2.5 m3 * 1.14	2.850	m3	0.00	0.00	21,780	0.00	(0.00)	62,073	02-227
		0.00	0							
Subtotal		100.00	m				185,442.63		62,073	
Per Unit Price		1.00	m				1,854.43	0.00	621	

00- 66 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Excavation inside of the well Reference H28MLIT 194

Specification: Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.07	person	21,870.00			1,530.90			Lab-1
Unskilled Labour		0.33	person	12,150.00			4,009.50			Lab-21
Clamshell(1.0m3)		0.13	day	0.00	499.61	0	0.00	(64.95)	0	Mac-d(44)
Crawler crane	50～55t hang	0.13	day	297,147.20	0.00		38,629.14	(0.00)		OPE-26
Barge	800t	0.13	day	1,388,221.15	0.00	0	180,468.75	(0.00)	0	Mac-d(20)
		0.00	0							
Subtotal		10.00	m3				224,638.29	64.95		
Per Unit Price		1.00	m3				22,463.83	6.50	0	

00- 67 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Spread sand Reference H28MLIT 194

Specification: Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.70	person	21,870.00			15,309.00			Lab-1
Diver	Foreigner	1.20	person	126,000.00			151,200.00			Lab-10
Unskilled Labour		1.30	person	12,150.00			15,795.00			Lab-21
Clamshell(1.0m3)		0.20	day	0.00	499.61	0	0.00	(99.92)	0	Mac-d(44)
Crawler crane	50～55t hang	0.20	day	297,147.20	0.00		59,429.44	(0.00)		OPE-26
Barge	800t	0.20	day	1,388,221.15	0.00	0	277,644.23	(0.00)	0	Mac-d(20)
Miscellaneous cost	Labour×6%	0.06	-	182,304.00			10,938.24			
Fine aggregate		10	m3	36,296.47	0.00	0				Mat-61
		0.00	0							
Subtotal		10.00	m3				530,315.91	99.92		
Per Unit Price		1.00	m3				53,031.59	9.99	0	

00- 68 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Bottom slab concrete Reference H28MLIT 194

Specification: Underwater concrete, 21N/mm2 Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	125 m3 * 0.75	93.8	m3/day							
Foreman	0.08 person *2	0.11	peraaon	21,870.00			2,332.80			Lab-1
Skilled Labour	0.18 person *2	0.24	peraaon	14,580.00			3,499.20			Lab-20
Unskilled Labour	0.27 person *2	0.36	peraaon	12,150.00			4,374.00			Lab-21
Concrete	for bottom slab of SPSP	10.60	m3	80,861.74	0.00	0.00	857,134.44	(0.00)	0	02-228
Concrete bucket	5.0 m3 *2 nos	0.21	day	109,945.50	0.00		23,455.04	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 3 nos	0.32	day	171,633.30			54,922.66			OPE-71
Barge 1 nos	500t	0.11	day	969,771.63	0.00	0	103,442.31	(0.00)	0	Mac-d(21)
Crawler crane	100t hang	0.11	day	604,856.00			64,517.97			OPE-42
Barge	1500t	0.11	day	2,498,798.08	0.00	0	266,538.46	(0.00)	0	Mac-d(10)
Subtotal		10.00	m3				1,380,216.88			
Per Unit Price		1.00	m3				138,021.69	0.00	0	

00- 69 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Falswork Install / Remove Reference H28MLIT 195

Specification: Install65%_Remove35% Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	2.6 person *2.5	6.5	person	21,870.00			142,155.00			Lab-1
Scaffolder	6.5 person *2.5	16.3	person	12,150.00			197,437.50			Lab-21
Unskilled Labour	3.9 person *2.5	9.8	person	12,150.00			118,462.50			Lab-21
Welder	4.1 person *2.5	10.3	person	19,440.00			199,260.00			Lab-17
Miscellaneous cost	LabourSubtotal x 23%	0.23	-	657,315.00		0	151,182.45		0	
Crawler crane	50～55t hang	4.10	day	297,147.20	0.00		1,218,303.52	(0.00)		OPE-26
Barge	800t	4.10	day	1,388,221.15	0.00	0	5,691,706.73	(0.00)	0	Mac-d(20)
Scaffolding	inside SPSP	10.000	t	0.00		67,084	0.00		670,841	02-236
Depreciation		(0.70)		0.00		670,841	0.00		-469,589	
Subtotal		10.00	t				7,718,507.70		201,252	
Per Unit Price		1.00	t				771,850.77	0.00	20,125	

00- 70 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Concrete filling to space between steel pipe well and wale Reference JICA study team

Specification: Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	11m3 * 0.75	8.25	m3/day							
Foreman	0.9 person / 75 %	0.11	peraaon	21,870.00			2,332.80			Lab-1
Skilled Labour	2.4 person / 75 %	3.20	peraaon	14,580.00			46,656.00			Lab-20
Unskilled Labour	2.8 person / 75 %	3.73	peraaon	12,150.00			45,360.00			Lab-21
Concrete bucket	5.0 m3 *2 nos	2.42	day	109,945.50	0.00		266,534.56	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 3 nos	3.64	day	171,633.30			624,121.11			OPE-71
Barge 1 nos	500t	1.21	day	969,771.63	0.00	0	1,175,480.77	(0.00)	0	Mac-d(21)
Crawler crane	100t hang	1.21	day	604,856.00			733,158.79			OPE-42
Barge	1500t	1.21	day	2,498,798.08	0.00	0	3,028,846.15	(0.00)	0	Mac-d(10)
Concrete	Class E	10.60	m3	74,380.08	0.00	0	788,428.85	(0.00)	0	02-225
Subtotal		10.00	m3				6,710,919.03			
Per Unit Price		1.00	m3				671,091.90	0.00	0	

00- 71 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Welding of the dowel Reference H28MLIT 196

Specification: Stud welding_1,000mm 1 row 4nos Quantity･Unit: 40 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.2 person *2.5	0.5	person	21,870.00			10,935.00			Lab-1
Skilled Labour	0.4 person *2.5	1.00	peraaon	14,580.00			14,580.00			Lab-20
Unskilled Labour	0.2 person *2.5	0.5	person	12,150.00			6,075.00			Lab-21
Welder	0.2 person *2.5	0.5	person	19,440.00			9,720.00			Lab-17
Welder for stud rebar		0.20	day	0.00		273,280	0.00		54,656	OPE-70
Generator	250kVA	0.20	day	1,058,950.01			211,790.00			OPE-54
Truck Crane	4.9t	0.10	day	244,440.00	0.00	0	24,444.00	(0.00)	0	ERN_12
Stud rebar	D22_1000mm	40.00	nos	0.00	0.00	1,485	0.00	(0.00)	59,400	Mat-281
Miscellaneous cost	5%	0.05	-	277,544.00	0.00	114,056	13,877.20	0.00	5,703	
Subtotal		40.00	nos				291,421.20		119,759	
Per Unit Price		1.00	nos				7,285.53	0.00	2,994	

00- 72 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Welding of the dowel Reference H28MLIT 196

Specification: Stud welding_700mm 1 row 4nos Quantity･Unit: 40 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.2 person *2.5	0.5	person	21,870.00			10,935.00			Lab-1
Skilled Labour	0.4 person *2.5	1.00	peraaon	14,580.00			14,580.00			Lab-20
Unskilled Labour	0.2 person *2.5	0.5	person	12,150.00			6,075.00			Lab-21
Welder	0.2 person *2.5	0.5	person	19,440.00			9,720.00			Lab-17
Welder for stud rebar		0.20	day	0.00		273,280	0.00		54,656	OPE-70
Generator	250kVA	0.20	day	1,058,950.01			211,790.00			OPE-54
Truck Crane	4.9t	0.10	day	244,440.00	0.00	0	24,444.00	(0.00)	0	ERN_12
Stud rebar	D22_700mm	40.00	nos	0.00	0.00	1,319	0.00	(0.00)	52,740	Mat-282
Miscellaneous cost	5%	0.05	-	277,544.00	0.00	107,396	13,877.20	0.00	5,370	
Subtotal		40.00	nos				291,421.20		112,766	
Per Unit Price		1.00	nos				7,285.53	0.00	2,819	

00- 73 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Steel pipe sheet pile Cut&Removal Reference H28MLIT 200

Specification: - Quantity・Unit: 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		1 * Tx / 1	2.3	person	21,870.00			50,301.00			Lab-1
Scaffolder		1 * Tx / 1	2.3	person	12,150.00			27,945.00			Lab-21
Skilled Labour		1 * Tx / 1	2.3	peraaon	14,580.00			33,534.00			Lab-20
Unskilled Labour		1 * Tx / 1	2.3	person	12,150.00			27,945.00			Lab-21
Tx=Ty+Tz	=1.8 + 0.5 = 2.3 day / 10 nos	Construction days/ 10nos									
Ty=1.8 day / 10 nos		Cutting days/ 10nos									
Tz=0.5 day / 10 nos		Removal days/ 10nos									
Cutter for steel pipe	Ty	φ1,200	1.80	day	0.00	0.00	0	0.00	(0.00)	0	Mac-d(45)
Vibratory hanmmer	Tz	90kw	0.50	day	0.00	299.70	0	0.00	(149.85)	0	Mac-d(24)
Generator	Tx	270/300kVA	2.30	day	1,427,596.15	0.00	0	3,283,471.15	(0.00)	0	Mac-d(33)
Subtotal			10.00	nos				3,423,196.15	149.85		
Per Unit Price			1.00	nos				342,319.62	14.99	0	

00- 74 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Transportation and Disporsal fee Reference H25MLIT 18

Specification: for disposal site including disposal fee Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Dump Truck		4.70	day	164,972	0		775,368	0		OPE-8
Subtotal		100.00	m3				775,368.40			
Per Unit Price		1.00	m3				7,753.68	0.00	0	

00- 75 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Leveling Reference H24MLIT P17

Specification: by Machine Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	2.0 person ×1.5	3.00	person	12,150.00			36,450.00			Lab-21
Subtotal		100.00	m2				36,450.00			
Per Unit Price		1.00	m2				364.50	0.00	0	

00-　76　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Backfilling　Reference　H24MLIT P23

Specification: Class_C,1m＜W1＜4m_Borrow material　Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	4.0(person)	4.00	person	12,150.00			48,600.00			Lab-21
Backhoe	･Crawler typeFull bucket0.6m3 4.0/0.85	4.71	hr	48,496.82			228,220.31			OPE-36
Vibration Roller	Hand Guide0.8～1.1t 1.35/85%	1.59	day	61,020.40			96,914.75			OPE-21
Tamper	60-100kg	10.00	m3	2,518.16			25,181.60			01-14
Sand	sand	133	m3	12,713.30			1,695,106.67			Mat-50
100m3 requires actual amount of sand =100(m3)x (L/C)=100x(1.2/0.9)=133(m3)										
100m3 requires operation hr of backhoe=4.0(hr)										
TamperQuantity=10(m3)										
Subtotal		100.00	m3				2,094,023.33			
Per Unit Price		1.00	m3				20,940.23	0.00	0	

00- 77 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Transportation of excavated soil Reference H25MLIT 18

Specification: Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Dump Truck	1.8 day	1.80	day	164,972.00	0.00		296,949.60	0.00		OPE-8
Subtotal		100.00	m3				296,949.60			
Per Unit Price		1.00	m3				2,969.50	0.00	0	

00- 78 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Concrete work for Pier(2)_On land Reference H28MLIT 735

Specification: Class D 0.00 Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.06x1.5	0.09	person	21,870.00			1,968.30			Lab-1
Skilled Labour	0.18x1.5	0.27	person	14,580.00			3,936.60			Lab-20
Unskilled Labour	0.24x1.5	0.36	person	12,150.00			4,374.00			Lab-21
Miscellaneous cost	4%	0.04	-	10,278.90	0.00	0	411	0	0	
Machinery										
Concrete pump car	0.06x/1 (day)	0.06	day	855,000	0	0	51,300	0	0	ERN_3
90-110m3/hr										
Miscellaneous cost	4%	0.04	-	51,300.00	0.00	0	2,052	0	0	
*for concrete pump only										
Material	Loss amount is counted									
Concrete	Class D	10.60	m3	80,122.96	0.00	0	849,303	0	0	02-224
Subtotal		10.00	m3				913,345			
Per Unit Price		1.00	m3				91,335	0	0	

00- 79 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D13 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Reinforcement bar D13	SD345 1x(1+0.055)	1.055	ton	40,450	0	74,334	42,674.72	(0.00)	78,422	Mat-1
Subtotal		1.00	ton				126,763.52		78,422	
Per Unit Price		1.00	ton				126,763.52	0.00	78,422	

00- 80 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D16-D25 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	0.9x2.5	2.25	person	18,270.00			41,107.50			Lab-15
Unskilled Labour	0.6x2.5	1.50	person	12,150.00			18,225.00			Lab-21
Miscellaneous cost		0.02	-	70,267.50			1,405.35			
Material	Loss amount is counted									
Reinforcement bar D16-D25	SD345 1x(1+0.055)	1.055	ton	40,449.97	0.00	77,034	42,674.72	(0.00)	81,271	Mat-5
Subtotal		1.00	ton				114,347.57		81,271	
Per Unit Price		1.00	ton				114,347.57	0.00	81,271	

00- 81 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D29-D32 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.1x2.5	0.25	person	21,870.00			5,467.50			Lab-1
Rebar work	0.5x2.5	1.25	person	18,270.00			22,837.50			Lab-15
Unskilled Labour	0.3x2.5	0.75	person	12,150.00			9,112.50			Lab-21
Miscellaneous cost		0.02	-	37,417.50			748.35			
Material	Loss amount is counted									
Reinforcement bar D29-D32	SD345 1x(1+0.055)	1.055	ton	40,449.97	0.00	78,748	42,674.72	(0.00)	83,080	Mat-7
Subtotal		1.00	ton				80,840.57		83,080	
Per Unit Price		1.00	ton				80,840.57	0.00	83,080	

00- 82 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D13 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 83 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D16-D25 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.3x2.5	0.75	person	21,870.00			16,402.50			Lab-1
Rebar work	1.5x2.5	3.75	person	18,270.00			68,512.50			Lab-15
Unskilled Labour	1.3x2.5	3.25	person	12,150.00			39,487.50			Lab-21
Miscellaneous cost		0.03	-	124,402.50			3,732.08			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				128,134.58			
Per Unit Price		1.00	ton				128,134.58	0.00	0	

00-　84　Productivity correction coefficient: Asia　Labour coefficient　General　Machine coefficient　none

Item: Rebar work_SD345　Reference　H4MOC　256

Specification: Assembling D29-D32　0.00　Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	0.9x2.5	2.25	person	18,270.00			41,107.50			Lab-15
Unskilled Labour	0.8x2.5	2.00	person	12,150.00			24,300.00			Lab-21
Miscellaneous cost		0.03	-	76,342.50			2,290.28			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				78,632.78			
Per Unit Price		1.00	ton				78,632.78	0.00	0	

00-　85　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Miscellaneous work　Reference　BE_H28 P572

Specification: Form work_Cylindrical type φ170　0.00　Quantity・Unit: 1 組

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1/3.4x1	0.29	person	44,100			12,971			Lab-2
Skilled Labour for Bridges	1/3.4x2	0.59	person	29,400			17,294			Lab-8
Unskilled Labour	1/3.4x2	0.59	person	12,150			7,147			Lab-21
Cylindrical Form	φ170mm L800mm	1.00	set	25,529	0	0	25,529	0	0	Mat-93
Rental fee of Roug terrain crane	1/3.4x1	0.29	day	232,008			68,238			OPE-27
Miscellaneous cost		0.06	-	105,650			6,339			
Subtotal		1.00	組				137,517			
Per Unit Price		1.00	組				137,517	0	0	

00-　86　Productivity correction coefficient: Asia　Labour coefficient　Simple　Machine coefficient　none

Item: Falsework　Reference　H28MLIT P273

Specification: Scaffloding (Handrail precede type)　Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.4*1.5	2.10	person	21,870			45,927			Lab-1
Scaffolder	7.7*1.5	11.55	person	18,270			211,019			Lab-6
Unskilled Labour	1.2*1.5	1.80	person	12,150			21,870			Lab-21
Crawler crane	50～55t hang	1.40	day	756,779	0	0	1,059,490	0	0	Mac-d(1)
Miscellaneous cost	31%	0.31		1,338,306	0	0	414,875	0	0	
Subtotal		100.00	m2				1,753,180.70			
Per Unit Price		1.00	m2				17,531.81	0.00	0	

諸雑費には足場仮設材等の費用であり、供用中の足場材損料を含む
＊クローラクレーンの機械賃料のみ含んだ
＊クレーンは賃料とする

00-　87　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Excavation　Reference　H24MLIT P20

Specification: Leveling of bottom　with support, for gravel, sand and cray soil　Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour		0.90	人	12,150.00			10,935.00			Lab-21
Backhoe Crawler typeFull bucket0.6m3	100/180/0.85	0.65	日	304,207.27			198,828.28			OPE-13
daily productivity(obstacle)=180(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/180=0.56(day)										
Subtotal		100.00	m3				209,763.28			
Per Unit Price		1.00	m3				2,097.63	0.00	0	

00-　88　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item:　Excavation　Reference　H24MLIT P20

Specification:　with support, for gravel, sand and cray soil　Quantity･Unit:　100　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour		0.90	人	12,150.00			10,935.00			Lab-21
Backhoe Crawler typeFull bucket0.6m3	100/190/0.85	0.62	日	304,207.27			188,363.64			OPE-13
daily productivity(obstacle)=190(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/190=0.53(day)										
Subtotal		100.00	m3				199,298.64			
Per Unit Price		1.00	m3				1,992.99	0.00	0	

00-　89　Productivity correction coefficient: Asia　Labour coefficient　Simple　Machine coefficient　none

Item: Concrete work for Pier(2)_On river　Reference　H28MLIT　735

Specification: Class C I　0.00　Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity		320.00	m3/day							
Labour										
Foreman	0.14*1.5	0.21	person	21,870.00			4,592.70			Lab-1
Skilled Labour	0.4*1.5	0.60	person	14,580.00			8,748.00			Lab-20
Unskilled Labour	0.54*1.5	0.81	person	12,150.00			9,841.50			Lab-21
Machine										
Crawler crane	100t hang	0.03	day	604,856.00			18,901.75			OPE-42
Barge	1500t	0.03	day	2,498,798.08	0.00	0	78,087.44	(0.00)	0	Mac-d(10)
Concrete bucket	5.0 m3 *2 nos	0.06	day	109,945.50	0.00		6,871.59	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 6 nos	0.19	day	171,633.30			32,181.24			OPE-71
Barge 2 nos	500t	0.06	day	969,771.63	0.00	0	60,610.73	(0.00)	0	Mac-d(21)
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	23,182.20	0.00	0	231.82	0.00	0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class C I	10.45	m3	85,496.90	0.00	0	893,443	0	0	02-224
Subtotal		10.00	m3				1,113,509			
Per Unit Price		1.00	m3				111,351	0	0	

00-　90　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Miscellaneous work　Reference　BE_H28 P572

Specification: Form work_Cylindrical type φ150　0.00　Quantity・Unit: 1 組

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1/3.4x1	0.29	person	44,100.00			12,970.59			Lab-2
Skilled Labour for Bridges	1/3.4x2	0.59	person	29,400.30			17,294.29			Lab-8
Unskilled Labour	1/3.4x2	0.59	person	12,150.00			7,147.06			Lab-21
Form	Cylindrical type form φ150	1.00	set			0			0	Mat-92
Rental fee of Roug terrain crane	1/3.4x1	0.29	day	232,008.00			68,237.65			OPE-27
Miscellaneous cost		0.06	-	105,649.59			6,338.98			
Subtotal		1.00	組				111,988.57			
Per Unit Price		1.00	組				111,988.57	0.00	0	

00-　91　Productivity correction coefficient:　Labour coefficient　none　Machine coefficient　General

Item:　Sheet pile driving　Reference　H24MLIT P301

Specification:　Nmax<50,Type III,shorter than 12m　Quantity・Unit:　10　nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/29/85% (person)	0.41	person	21,870.00			8,872.21			Lab-1
Scaffolder	2.0×10/29/85% (person)	0.81	person	18,270.00			14,823.53			Lab-6
Unskilled Labour	1.0×10/29/85% (person)	0.41	person	12,150.00			4,929.01			Lab-21
Crawler crane	50～55t hang	0.41	day	297,147.20			120,546.53			OPE-26
Vibratory hanmmer	60kw	0.41	day	53,298.00	227.29		21,621.91	(92.21)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×22%	0.22	-	170,793.19			37,574.50			
Subtotal		10.00	nos				208,367.69	92.21		
Per Unit Price		1.00	nos				20,836.77	9.22	0	

00-　92　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Sheet pile pulling　Reference　H24MLIT P301

Specification: Nmax<50,shorter than 12m　Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/50/85% (person)	0.24	person	21,870.00			5,145.88			Lab-1
Scaffolder	2.0×10/50/85% (person)	0.47	person	18,270.00			8,597.65			Lab-6
Unskilled Labour	1.0×10/50/85% (person)	0.24	person	12,150.00			2,858.82			Lab-21
Crawler crane	50～55t hang	0.24	day	297,147.20			69,916.99			OPE-26
Vibratory hanmmer	60kw	0.24	day	53,298.00	227.29		12,540.71	(53.48)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×22%	0.19	-	99,060.05			18,821.41			
Subtotal		10.00	nos				117,881.46	53.48		
Per Unit Price		1.00	nos				11,788.15	5.35	0	

00- 93 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Falsework(Guide,Frame,Wale,Strut) Reference H24MLIT P320

Specification: H-beam_Install / Remove Quantity・Unit: 10 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Installation										
Foreman	1.7x2.5	4.25	person	21,870.00			92,947.50			Lab-1
Scaffolder	3.2x2.5	8.00	person	18,270.00			146,160.00			Lab-6
Welder	1.7x2.5	4.25	person	19,440.00			82,620.00			Lab-17
Unskilled Labour	1.7x2.5	4.25	person	12,150.00			51,637.50			Lab-21
Rough terrain crane	25t hang	1.70	day	232,008.00			394,413.60			OPE-27
Miscellaneous cost	Labour cost Subtotal x 4%	0.04	-	373,365.00			14,934.60			
Remove										
Foreman	1x2.5	2.50	person	21,870.00			54,675.00			Lab-1
Scaffolder	1.9x2.5	4.75	person	18,270.00			86,782.50			Lab-6
Welder	1x2.5	2.50	person	19,440.00			48,600.00			Lab-17
Unskilled Labour	1x2.5	2.50	person	12,150.00			30,375.00			Lab-21
Rough terrain crane	25t hang	1.00	day	232,008.00			232,008.00			OPE-27
Miscellaneous cost	Labour cost Subtotal x 6%	0.06	-	220,432.50			13,225.95			
Material cost										
Material cost is counted in direct cost										
Miscellaneous cost is for welding equipment and tool etc										
Subtotal		10.00	ton				1,248,379.65			
Per Unit Price		1.00	ton				124,837.97	0.00	0	

00- 96 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Fabrication of steel tower Reference

Specification: Cable stayed bridge Quantity･Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Direct cost										
Material cost										
Plate	Tower(2 nos)	1.00	LS	0	0	88,399,283	0	0	88,399,283	01-45
Shape	Tower(2 nos)	1.00	LS	16,919	0	434,471	16,919	0	434,471	01-46
High strength bolt	Tower(2 nos)	1.00	LS	1,944,737	0	1,432,224	1,944,737	0	1,432,224	01-47
Fabrication cost										
Fabrication cost of direct labour cost	Tower(2 nos)	1.00	LS	0	0	143,188,700	0	0	143,188,700	01-48
Painting in factory										
Blasting in factory		4,791.70	m2	0	0	2,338	0	0	11,204,432	01-49
Paint labour cost	C-5	1,262.60	m2	0	0	2,037	0	0	2,571,916	01-50
Paint labour cost	D-5	3,014.70	m2	0	0	1,304	0	0	3,930,204	01-53
Paint Material cost	C-5	1,262.60	m2	0	0	2,418	0	0	3,053,169	01-51
Paint Material cost	D-5	3,014.70	m2	0	0	943	0	0	2,842,983	01-52
(Total paint material cost)		1.00	LS	0	0	5,896,152	0	0	5,896,152	
Indirect cost										
Indirect cost of fabrication	Direct cost * 37.6%	0.376		0	0	143,188,700	0	0	53,838,951	
Administration fee	Direct cost(without material cost)&indirect cost*28.8%	0.288		0	0	214,734,203	0	0	61,843,450	
Subtotal		1.00	L.S.				1961656.29		372739783	
Per Unit Price		1.00	L.S.				1,961,656	0	372,739,783	

00- 97 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Fabrication of steel girder Reference

Specification: Cable stayed bridge Quantity･Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Direct cost										
Material cost										
Plate		1.00	LS	0	0	633,042,449	0	0	633,042,449	01-54
Shape		1.00	LS	0	0	166,304,760	0	0	166,304,760	01-55
High strength bolt		1.00	LS	0	0	25,413,463	0	0	25,413,463	01-56
Fabrication cost										
Fabrication cost of direct labour cost		1.00	LS	0	0	2,293,540,537	0	0	2,293,540,537	01-57
Painting in factory										
Blasting		80,673.3	m2	0	0	2,338	0	0	188,638,377	01-49
Paint labour cost	C-5	20,024	m2	0	0	2,037	0	0	40,788,888	01-50
Paint labour cost	D-5	40,135.80	m2	0	0	1,304	0	0	52,324,240	01-53
Paint Material cost	C-5	20,024.00	m2	0	0	2,418	0	0	48,421,236	01-51
Paint Material cost	D-5	40,135.80	m2	0	0	943	0	0	37,849,665	01-52
In-Organic Zinc Rich Paint	On Steel Deck	9,398.00	m2	0	0	1,157	0	0	10,869,445	01-58
(Total paint material cost)		1.00	LS	0	0	86,270,901	0	0	86,270,901	
Indirect cost										
Indirect cost of fabrication	Direct cost * 37.6%	0.376		0	0	2,293,540,537	0	0	862,371,242	
Administration fee	Direct cost(without material cost)&indirect cost*28.8%	0.288		0	0	3,259,894,352	0	0	938,849,573	
Subtotal		1.00	L.S.						5,298,413,875	
Per Unit Price		1.00	L.S.				0	0	5,298,413,875	

00- 98 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Erection of tower Reference

Specification: Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Reassembling_in construction yard	2 nos of tower	595.30	t	15,804	0.00	0	9,408,324	0	0	01-64
Erection of tower	Erection	595.30	t	194,965	0.00	0	116,062,516	0	0	01-66
Welding in site	Tower(2nos)	220	m	425,604	0.00	0	93,632,805	0	0	01-67
Bracket support for scaffolding	at tower bottom	1.00	0	14,696,208	0.00	607,866	14,696,208	0	607,866	01-68
Scaffolding for Tower	Hand rail precede type	1,788.6	m2	110,536	0.00	0	197,704,332	0	0	01-69
Dead bolting	Tower_Interior	10,360	nos	294	0.00	138	3,050,502	0	1,431,234	01-73
Assembling&Disassembling_Weight below 300 t cra	200 t CC on cable stayed bridge girder	2.00	time	4,900,360	167,502.42	0	9,800,720	335,005	0	01-75
Subtotal		1.00	L.S.				444,355,406	335,005	2,039,100	
Per Unit Price		1.00	L.S.				444,355,406	335,005	2,039,100	

00- 99 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Erection of main girder Reference

Specification: Side span Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bent instllation and removal	Cable stay bridge_Side span	1.00	LS	1,312,321,351	110,797.44	70,923,287	1,312,321,351	110,797.44	70,923,287	01-76
Scaffolding	Side span_Cable_Stayed	1.00	LS	0	0.00	68,430,264	0	0.00	68,430,264	01-77
Fall prevention / protection and Ascending ladder	Side span_Cable_Stayed	1.00	LS	0	0.00	10,375,515	0	0.00	10,375,515	01-78
Reassembling	in construction yard	3,060	t	66,383	0.00	0	203,132,133	0.00	0	01-79
Girder erection	Side span by 350tCC mounted on 4,000t barge	3,060	t	12,275	188.18	0	37,561,225	(575,830.80)	0	01-82
Subtotal		1.00	L.S.				1,553,014,709	686,628.24	149,729,066	
Per Unit Price		1.00	L.S.				1,553,014,709	686,628.24	149,729,066	

00-　100　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Stressing of PC cable　Reference

Specification: Cable stayed bridge　Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Material										
Cable Material		1.00	LS	0	0	294,281,000	0	0	294,281,000	01-88
Work item (Team organisation)										
Setting anchor device		1.00	LS	10,834,778	0	0	10,834,778	0	0	01-90
Cable Stressing		1.00	LS	143,553,906	0	0	143,553,906	0	0	01-91
Adjustment stressing force		1.00	LS	16,668,368	0	0	16,668,368	0	0	01-92
Setting adjustment device		1.00	LS	13,313,891	0	0	13,313,891	0	0	01-93
Miscellaneous work		1.00	LS	10,898,291	0	0	10,898,291	0	0	01-94
Equipment										
Cable erection tool		1.00	LS	0	0	14,416,480	0	0	14,416,480	01-95
Duct erection tool		1.00	LS	0	0	9,739,360	0	0	9,739,360	01-96
Stress adjustment equipment		1.00	LS	0	0	9,451,200	0	0	9,451,200	01-97
Injection tool of anti-corrosion material		1.00	LS	0	0	1,176,120	0	0	1,176,120	01-98
Management cost for cable stayed bridge										
Stress adjustment cost										
Measuring installed stress		1.00	LS	0	0	9,368,930	0	0	9,368,930	Quotation
Monitoring change of installed stress		1.00	LS	0	0	1,558,000	0	0	1,558,000	Quotation
Lift up&down of materials		80.00	time	998,128	0	0	79,850,245	0	0	01-99
Subtotal		1.00	L.S.				275,119,479		339,991,090	
Per Unit Price		1.00	L.S.				275,119,479	0	339,991,090	

00- 101 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Painting in site Reference

Specification: Tower and Girder Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Painting in site	F-11 (Exterior)	1,175.50	m2	6,179	0	2,150	7,262,874	0	2,527,443	01-122
Painting in site	F-12 (Interior)	2,852.80	m2	5,631	0	1,253	16,063,518	0	3,574,787	01-123
Painting in site	F-13 (Exterior)	1,653.90	m2	7,274	0	3,943	12,030,518	0	6,520,567	01-124
Painting in site	F-14 (Interior)	730.30	m2	5,083	0	2,099	3,712,144	0	1,532,695	01-125
Painting in site	In-Organic Zinc Rich Paint	6,180.20	m2	5,083	0	741	31,414,204	0	4,579,528	01-126
Subtotal		1.00	LS				70,483,258		18,735,020	
Per Unit Price		1.00	LS				70,483,258	0	18,735,020	

00-　102　　Productivity correction coefficient: Asia　　Labour coefficient　　Machine coefficient

Item: Bearing setting　　Reference

Specification: Cable stayed bridge　　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber Bearing										
Rubber Bearing	Normal type(Steel Girder)		nos							01-128
Rubber Bearing	Separat perform type(Steel Girder)		nos							01-129
Metal bearing										
Metal bearing	Steel girder	12.00	nos	1,341,705	0	0	16,100,461	0	0	01-130
Bearing for Cable stayed bridge	Bearing For Horizontal Force_2300kN	2	nos	0	0	11,880,000	0	0	23,760,000	Mat-353
	Rocking Bearing_3700kN_Only Core	4	nos	0	0	49,500,000	0	0	198,000,000	Mat-354
	Pivot Bearing_58100kN	2	nos	0	0	93,447,000	0	0	186,894,000	Mat-355
	Pin Roller Bearing_20900kN	4	nos	0	0	38,844,000	0	0	155,376,000	Mat-356
Tie bar	Rocking Bearing_3700kN_Frame	4	nos	0		0	0		0	Mat-357
Anchor frame	for Rocking Bearing_3700kN	4	nos	0		0	0		0	Mat-360
Anchor frame+Pedestal frame	for Pivot Bearing_58100kN	2	nos	0		0	0		0	Mat-361
Anchor frame+Pedestal frame	for Pin Roller Bearing_20900kN	4	nos	0		0	0		0	Mat-362
*These highlighted item's cost is included into main girder fabrication										
Subtotal		1.00	LS				16,100,461		564,030,000	
Per Unit Price		1.00	LS				16,100,461	0	564,030,000	

00- 103 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Expaansion Joint setting Reference

Specification: Cable stayed bridge Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Modular type	P10 mageba KM J (LR-5 M)	22.90	m	134,392.32	0.00	1,048,161	3,077,584.13	0.00	24,002,876	01-132
Modular type	P13 mageba KM J (LR-6 M)	22.90	m	134,392.32	0.00	1,274,143	3,077,584.13	(0.00)	29,177,876	01-133
Subtotal		1.00	LS				6,155,168.26		53,180,752	
Per Unit Price		1.00	LS				6,155,168.26	0.00	53,180,752	

00- 106 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Drainage work Reference H25MLIT P880

Specification: For Any Quantity･Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication & Material cost for drainage basin		10.00	nos	2,182.34	0.00	53,767	21,823.40	0.00	537,670	01-136
Catch basin setting		10.00	nos	11,521.85	0.00	0	115,218.50	(0.00)	0	01-138
Subtotal		10.00	nos				137,041.90		537,670	
Per Unit Price		1.00	nos				13,704.19	0.00	53,767	

00- 107 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Stay Cable Damping Device Reference JICA study team

Specification: Setting and Material cost Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour		1.25	person	12,150.00			15,187.50			Lab-21
Cable Damper	1set 3nos 37H,70H	10.00	nos	0.00	0.00	576,900	0.00	(0.00)	5,769,000	Mat-460
Subtotal		10.00	nos				15,187.50		5,769,000	
Per Unit Price		1.00	nos				1,518.75	0.00	576,900	

00- 108 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Post tension girder fabrication Reference H12MOC P620

Specification: PC-I girder_Ramp Quantity・Unit: 8 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete for PC-I girder	40 N/mm2	235	m3	134,479	0	875	31,602,551	0	205,663	01-142
Rebar work	D16-25	33.000	t	360,170	0	78,337	11,885,623	0	2,585,111	01-144
Installation of PC cable	12S12.7mm (SWPR7BL)	910.00	m	23,230	0	656	21,139,245	0	597,087	01-147
Prestressing	for PC-I girder	32	Cable	74,614	0	28,800	2,387,657	0	921,600	01-148
Transportation	by Carriage (carriage length: below 200m)	8	nos	294,178	0	0	2,353,424	0	0	01-149
Rail installation&remove	30 kg / m rail (2 parallel rails)	200.00	m	23,441	0	0	4,688,280	0	0	01-150
Equipment Rent. Install & Removal		1.00	LS	142,259,855	0	0	142,259,855	0	0	01-151
Steel Base Formwork Works	Install / Remove	124	m	14,317	0	0	1,775,277	0	0	01-152
Steel Base Formwork Adjustment Works		4.00	nos	36,518	0	0	146,070	0	0	01-153
Subtotal		8.00	nos				218,237,982		4,309,461	
Per Unit Price		1.00	nos				27,279,748	0	538,683	

00- 109 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: PC-I girdr erection Reference H12MOC P637

Specification: 160t Truck crane Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity=260 t / day	about 80 ton/girder	3.25	nos/day							
Foreman for Bridges	1.0x2.5	2.50	person	44,100.00			110,250.00			Lab-2
Skilled Labour for Bridges	8.0.x2.5	20.00	person	29,400.30			588,006.00			Lab-8
Unskilled Labour	5x2.5	12.50	person	12,150.00			151,875.00			Lab-21
Track crane	160t * 2	5.00	day	826,100.80			4,130,504.00			OPE-75
	2 nos / day									
	8 nos erection = 4 days									
	*10 nos = 5 days									
Subtotal		10.00	nos				4,980,635.00			
Per Unit Price		1.00	nos				498,063.50	0.00	0	

00- 110 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: PC pannel installation Reference H28MLIT P799

Specification: PC-I girder_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PC Precast Panels Sealing Works	Both sides by indicated length	110.00	m	10,092	0	720	1,110,130	0	79,151	01-154
PC pannel temp. storage		108	nos	6,090	0	0	657,761	0	0	01-155
PC Precast Panels Installation Works		108	nos	300,467	0	0	32,450,448	0	0	01-156
RC Precast Panels Joint Works	between PC plates	301.00	m	2,102	0	0	632,729	0	0	01-157
Subtotal		1.00	LS				34,851,068		79,151	
Per Unit Price		1.00	LS				34,851,068	0	79,151	

00- 111 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Cross beam work Reference

Specification: PC-I girder_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Form work	Cross beam	135.00	m2	25,370	0	0	3,424,897	0	0	01-160
Rebar work	Cross beam	6.00	t	326,076	0	78,337	1,956,454	0	470,020	01-161
Concrete work(Transporting length below 30m)	Cross beam	63.00	m3	234,290	0	0	14,760,300	0	0	01-162
PC bar installation	Cross beam	1.86	t	2,358,148	0	306,900	4,386,155	0	570,834	01-163
PC bar anchor setting	Cross beam	140.00	set	9,621	0	7,380	1,346,975	0	1,033,200	01-164
PC bar prestressing	Cross beam	70.00	set	50,654	0	0	3,545,749	0	0	01-165
Scaffolding	Cross beam	1.00	set	0	0	3,511,148	0	0	3,511,148	01-166
Subtotal		1.00	LS				29,420,530		5,585,202	
Per Unit Price		1.00	LS				29,420,530	0	5,585,202	

00- 112 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Slab work(Except for PC pannel) Reference H28MLIT 801

Specification: PC-I girder_Ramp Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Form work for PC-I deck	Ramp	290.00	m2	28,647	0	0	8,307,485	0	0	01-168
Rebar work_SD345	Arranging D13	1.000	ton	126,764	0	78,422	126,764	0	78,422	00-79
Rebar work_SD345	Arranging D16-D25	50.000	ton	114,348	0	81,271	5,717,379	0	4,063,550	00-80
Rebar work_SD345	Assembling D13	1.000	ton	154,137	0	0	154,137	0	0	00-82
Rebar work_SD345	Assembling D16-D25	50.000	nos	128,135	0	0	6,406,729	0	0	00-83
Concreting(including curing fee)	Deck slab	153.00	m3	120,852	0	0	18,490,400	0	0	01-170
Subtotal		1.00	set				39,202,893		4,141,972	
Per Unit Price		1.00	set				39,202,893	0	4,141,972	

00- 113 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Bearing_Set Reference H28MLIT 807

Specification: PC-I girder_Ramp Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily Productivity	Total 16 nos / (9 nos / day) = 1.78 days									
Foreman for Bridges	10/N * 1.0 * 2.5	2.78	person	44,100.00			122,500.00			Lab-2
Skilled Labour for Bridges	10/N * 2.0 * 2.5	5.56	person	29,400.30			163,335.00			Lab-8
Unskilled Labour	10/N * 2.0 * 2.5	5.56	person	12,150.00			67,500.00			Lab-21
Miscellaneous cost	4%	0.04		353,335.00	0.00	0	14,133.40	(0.00)	0	
Rough terrain crane	25t hang	1.11	day	232,008.00	0.00		257,786.67	(0.00)		OPE-27
Subtotal		10.00	nos				625,255.07			
Per Unit Price		1.00	nos				62,525.51	0.00	0	

00- 114 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Expansion Joint setting Reference MOCH5 798

Specification: for Ramp Quantity･Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	=2.3 person * 1.5	3.45	person	21,870.00			75,451.50			Lab-1
Skilled Labour	=6.2 person * 1.5	9.30	person	14,580.00			135,594.00			Lab-20
Unskilled Labour	=4.2 person * 1.5	6.30	person	12,150.00			76,545.00			Lab-21
Miscellaneous cost	10%	0.10		287,590.50	0.00	0	28,759.05	(0.00)	0	
Subtotal		10.00	m				316,349.55			
Per Unit Price		1.00	m				31,634.96	0.00	0	

00- 115 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Bearing cost Reference

Specification: for Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bearing for PC I girder (On Ramp)	for A01	2.00	nos	0.00	1,063.80	0	0.00	2,127.60	0	Mat-390
Bearing for PC I girder (On Ramp)	for P01	4.00	nos	0.00	842.40	0	0.00	3,369.60	0	Mat-391
Bearing for PC I girder (On Ramp)	for P02	4.00	nos	0.00	842.40	0	0.00	3,369.60	0	Mat-392
Bearing for PC I girder (On Ramp)	for P03	4.00	nos	0.00	842.40	0	0.00	3,369.60	0	Mat-393
Bearing for PC I girder (On Ramp)	for P5	2.00	nos	0.00	1,292.40	0	0.00	2,584.80	0	Mat-394
Subtotal		1.00	LS					14,821.20		
Per Unit Price		1.00	LS				0.00	14,821.20	0	

00- 116 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Deck treatment Reference MLITH11 615

Specification: Waterproof layer Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5 person * 2.5	1.25	person	21,870.00			27,337.50			Lab-1
防水工	1.2 person * 2.5	3.00	person	14,580.00			43,740.00			Lab-20
Unskilled Labour	0.7 person * 2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost	5%	0.05		92,340.00	0.00	0	4,617.00	(0.00)	0	
Asphalt Waterproof membrane		100.00	m2	0.00	0.00	2,138	(0.00)	0.00	213,750	Mat-98
Subtotal		100.00	m2				96,957.00		213,750	
Per Unit Price		1.00	m2				969.57	0.00	2,138	

00- 117 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Drainage work Reference H25MLIT P880

Specification: PC-I girder_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Catch Basin Fabrication	0	6.00	nos	2,182	0	53,767	13,094	0	322,602	01-136
Anchor bolt setting for concrete			nos	1,205	0	205	0	0	0	01-137
Drainage Pipe Installation	PVC pipe	75.80	m	35,687	0	0	2,705,043	0	0	01-176
Catch basin setting		6.00	nos	11,522	0	0	69,131	0	0	01-138
Subtotal		1.00	LS				2,787,268		322,602	
Per Unit Price		1.00	LS				2,787,268	0	322,602	

00-　119　　Productivity correction coefficient: Asia　　Labour coefficient　Simple　　Machine coefficient　none

Item: Bridge Name Plate Installation Works　　Reference　MOC/1993 P.444

Specification:　　Quantity・Unit:　10　nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Post installation										
Foreman	0.6(person)×1.5	0.90	person	21,870.00			19,683.00			Lab-1
Skilled Labour	2(person)×1.5	3.00	person	14,580.00			43,740.00			Lab-20
Steel post	Φ60.5mm / 4.5m	20.00	nos	107,740.38	0.00	0	2,154,807.60	(0.00)	0	Mat-458
Plate installation										
Foreman	0.5(person)×1.5	0.75	person	21,870.00			16,402.50			Lab-1
Skilled Labour	1.7(person)×1.5	2.55	person	14,580.00			37,179.00			Lab-20
Bridge Nameplate	1800*1200	10.00	nos	1,675,298.08	0.00	0	16,752,980.80	(0.00)	0	Mat-459
Subtotal		10.00	nos				19,024,792.90			
Per Unit Price		1.00	nos				1,902,479.29	0.00	0	

00-　120　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Backfilling　Reference　H24MLIT P23

Specification: Class_D,W1＜1m,Suitable soil　Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	4.0(person)	4.00	person	12,150.00			48,600.00			Lab-21
Backhoe	･Crawler typeFull bucket0.6m3 6.0/0.85	7.06	hr	48,496.82			342,330.47			OPE-36
Tamper	60-100kg	100.00	m3	2,518.16			251,816.00			01-14
100m3 requires actual amount of sand =100(m3)x (L/C)=100x(1.2/0.9)=133(m3)										
100m3 requires operation hr of backhoe=6.0(hr)										
TamperQuantity=100(m3)										
Subtotal		100.00	m3				642,746.47			
Per Unit Price		1.00	m3				6,427.46	0.00	0	

00- 121 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Leveling Reference H24MLIT P56

Specification: by manpower Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.7(person) x1.5	1.05	person	21,870.00			22,963.50			Lab-1
Unskilled Labour	5.9(person) x1.5	8.85	person	12,150.00			107,527.50			Lab-21
Subtotal		100.00	m2				130,491.00			
Per Unit Price		1.00	m2				1,304.91	0.00	0	

00- 122

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Expansion Joint cost

Reference

Specification: for Ramp

Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Expansion Joint	A01	5.25	m	0.00	0.00	82,620	0.00	0.00	433,755	Mat-407
Expansion Joint	P04		m	0.00	0.00	864,706	0.00	0.00	0	Mat-406
Subtotal		1.00	LS						433,755	
Per Unit Price		1.00	LS				0.00	0.00	433,755	

00- 124 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Precast Panels Installation Works Reference H28MLIT P51

Specification: Reinforced Retaining Wall (Type 1) Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0 (person) x 2.5	2.50	person	21,870.00			54,675.00			Lab-1
Skilled Labour	1.0 (person) x 2.5	2.50	person	14,580.00			36,450.00			Lab-20
Unskilled Labour	2.1 (person) x 2.5	5.25	person	12,150.00			63,787.50			Lab-21
Precast Concrete Panel (Reinf. Earth Wall)		100.00	m2	208,105.20	0.00	0	20,810,520.00	(0.00)	0	Mat-128
Rough terrain crane	25t hang	0.50	day	232,008.00			116,004.00			OPE-27
Backhoe Crawler typeFull bucket0.6m3		2.00	day	304,207.27			608,414.54			OPE-13
Miscellaneous cost	Subtotal of Labour cost, depreciation and operation cost	0.10	-	879,331.04		0	87,933.10		0	
Subtotal		100.00	m2				21,777,784.14			
Per Unit Price		1.00	m2				217,777.84	0.00	0	

00- 125 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Reinforcement Material Installation Works Reference H28MLIT P52

Specification: Reinforced Retaining Wall (Type 1) Quantity・Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.11 (person) x 2.5	0.28	person	21,870.00			6,014.25			Lab-1
Skilled Labour	0.11 (person) x 2.5	0.28	person	14,580.00			4,009.50			Lab-20
Unskilled Labour	0.22 (person) x 2.5	0.55	person	12,150.00			6,682.50			Lab-21
Metallic Strip	width 60 mm	100.00	m	0.00	0.00	1,233	0.00	(0.00)	123,300	Mat-119
Subtotal		100.00	m				16,706.25		123,300	
Per Unit Price		1.00	m				167.06	0.00	1,233	

00- 126 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Fill, Level & Compaction Works Reference H28MLIT P52

Specification: Reinforced Retaining Wall (Type 1) Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		0.51	person	21,870.00			11,153.70			Lab-1
Skilled Labour		0.40	person	14,580.00			5,832.00			Lab-20
Unskilled Labour		0.83	person	12,150.00			10,084.50			Lab-21
Backhoe Full bucket0.6m3	0.23 (day) /95%	0.24	day	304,207.27			73,650.18			OPE-13
Bulldozer	0.29 (day) /95%	0.31	day	272,216.00			83,097.52			OPE-14
Vibration Roller	0.29 (day) /95%	0.31	day	107,979.20			32,962.07			OPE-20
Miscellaneous cost	Subtotal of Labour cost, depreciation and operation cost	0.03	-	216,779.97		0	6,503.40		0	
Subtotal		100.00	m3				223,283.37			
Per Unit Price		1.00	m3				2,232.83	0.00	0	

00- 127 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Concret work_other material installation Reference JICA study team

Specification: Reinforced Retaining Wall (Type 1) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	142.10	m3	99,456	0	0	14,132,739	0	0	00-51
Form work	for ordinal concrete_with&without rebar	430.10	m2	8,785	0	0	3,778,304	0	0	01-22
Rebar work_SD345	Arranging D13	7.13	ton	114,348	0	81,271	814,955	0	579,218	00-80
Rebar work_SD345	Assembling D13	7.13	ton	154,137	0	0	1,098,534	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.631	ton	114,348	0	81,271	72,153	0	51,282	00-80
Rebar work_SD345	Assembling D16-D25	0.631	nos	128,135	0	0	80,853	0	0	00-83
Joint filler	t=10mm	1.44	m2	0	0	351	0	0	505	Mat-441
Joint filler	t=20mm	17.55	m2	0	0	702	0	0	12,320	Mat-442
Rubber Plate	t=10mm (10x300x600)	30.50	m2	0	0	11,610	0	0	354,105	Mat-443
Styrene Foam	b=50mm (50x500x1000)		m3	0	0	19,530	0	0	0	Mat-444
Geotextile		406.50	m2	0	0	324	0	0	131,706	Mat-445
Subtotal		1.00	LS				19,977,538		1,129,136	
Per Unit Price		1.00	LS				19,977,538	0	1,129,136	

00-　128　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Base concrete of Reinforced Retaining Wall (Type 1)　Reference

Specification: Base concrete　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work(1)	18N/mm2	23.37	m3	95,194	0	0	2,224,694	0.00	0	00-52
Form work	for ordinal concrete_with&without rebar	40.7	m2	8,784.71	0.00	0.00	357,538	0.00	0	01-22
Subtotal		1.00	LS				2,582,232.00			
Per Unit Price		1.00	LS				2,582,232.00	0.00	0	

00- 129 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Guard-rail installation Reference MOCH4 P420

Specification: Metal type(GR-A) Quantity･Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	17 (person) x1.5	25.50	人	12,150			309,825			Lab-21
建込,小運搬,レール取付,充填 路側用										
高欄兼用車両用防護柵	Class_A(SP)	100.00	m			30,000			3,000,000	Mat-105
Subtotal		100.00	m				309,825		3,000,000	
Per Unit Price		1.00	m				3,098	0	30,000	

00- 130 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Guard-rail installation Reference MOCH4 P420

Specification: Metal type(GR-B) Quantity･Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	17 (person) x1.5	25.50	人	12,150			309,825			Lab-21
建込,小運搬,レール取付,充填 路側用										
高欄兼用車両用防護柵	Class_A(SP)	100.00	m			26,457			2,645,700	Mat-105
Subtotal		100.00	m				309,825		2,645,700	
Per Unit Price		1.00	m				3,098	0	26,457	

00- 137 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=1.5/2.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	20.10	m3	99,456.29	0.00	0	1,999,071.43	(0.00)	0	00-51
Concrete work(1)	18N/mm2	2.15	m3	95,194.45	0.00	0	204,668.07	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	138.00	m2	8,784.71	0.00	0	1,212,289.98	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	4.30	m3	917.60	0.00	0	3,945.68	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	1.029	ton	126,764	0.0	78,422	130,440	0.00	80,696	00-79
Rebar work_SD345	Assembling D13	1.029	ton	154,137	0.0	0	158,607	0.00	0	00-82
Excavation	Excavation for foundation	142.59	m3	1,610.51	0.00	0	229,639.40	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	81.14	m3	20,940.23	0.00	0	1,699,090.26	0.00	0	00-76
Subtotal		10.00	m				5,637,751.38		80,696	
Per Unit Price		1.00	m				563,775.14	0.00	8,070	

00- 139 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Pipe culvert Reference JICA study team

Specification: φ0.9m,360° concreted Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Precast concrete pipe	dia. 900mm	10.00	m	67,270.50	0.00	0	672,705.00	0.00	0	Mat-23
Concrete work	24N/mm2	12.66	m3	99,456.29	0.00	0	1,258,818.26	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.66	m3	95,194.45	0.00	0	158,022.79	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	29.20	m2	8,784.71	0.00	0	256,513.53	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	3.32	m3	917.60	0.00	0	3,046.43	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.746	ton	126,764	0.0	78,422	94,566	0.00	58,503	00-79
Rebar work_SD345	Assembling D13	0.746	ton	154,137	0.0	0	114,986	0.00	0	00-82
Excavation	Excavation for foundation	85.65	m3	1,610.51	0.00	0	137,946.62	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	78.54	m3	20,940.23	0.00	0	1,644,687.54	0.00	0	00-76
Subtotal		10.00	m				4,341,291.91		58,503	
Per Unit Price		1.00	m				434,129.19	0.00	5,850	

00- 140 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=1.5/1.5m,H=1.85m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	3.59	m3	99,456.29	0.00	0	357,246.99	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.40	m3	95,194.45	0.00	0	38,077.78	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	29.80	m2	8,784.71	0.00	0	261,819.50	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.80	m3	917.60	0.00	0	734.08	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.157	ton	126,764	0.0	78,422	19,902	0.00	12,312	00-79
Rebar work_SD345	Assembling D13	0.157	ton	154,137	0.0	0	24,200	0.00	0	00-82
Excavation	Excavation for foundation	31.05	m3	1,610.51	0.00	0	50,012.78	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	17.00	m3	20,940.23	0.00	0	356,067.67	0.00	0	00-76
Subtotal		1.00	nos				1,108,060.17		12,312	
Per Unit Price		1.00	nos				1,108,060.17	0.00	12,312	

00-　142　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Excavation　Reference　H24MLIT P20

Specification: Excavation for foundation by machine and manpower　Quantity･Unit:　100　m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Backhoe	･Crawler typeFull bucket0.6m3 100/190/85%	0.62	日	304,207.27			188,363.64			OPE-13
Unskilled Labour	3.9(person)	3.90	人	12,150.00			47,385.00			Lab-21
Daily productivity =190(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/190=0.53(day)										
Subtotal		100.00	m3				235,748.64			
Per Unit Price		1.00	m3				2,357.49	0.00	0	

00-　143　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Excavation　Reference　H24MLIT P20

Specification: Excavation for foundation　Quantity･Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Backhoe	･Crawler typeFull bucket0.6m3 100/180/85%	0.65	day	304,207.27			198,828.28			OPE-13
daily productivity=180(m3/day)										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/180=0.56(day)										
Subtotal		100.00	m3				198,828.28			
Per Unit Price		1.00	m3				1,988.28	0.00	0	

00- 144 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Levelling & compacting soil Reference H24MLIT P36

Specification: Filled up ground material 10,000m3 below ,Borrow material 0.00 Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	15 t	0.15	day	272,216.00			40,832.40			OPE-14
Tire roller	8－20t	0.08	day	270,040.00			21,603.20			OPE-5
Unskilled Labour	0.2(person)	0.20	person	12,150.00			2,430.00			Lab-21
Filled up ground material	Sandy Soil	133	m3	0.00			0.00			Mat-45
100m3 require amount =compcted amount (m3)/change rate of soil volume(C/L)=100/(0.9/1.2)=133(m3)										
Bulldozer daily productivity=690m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/690=0.14(day)										
Corrected day =0.14/95%=0.15(day)										
Tire roller daily productivity=1330m3/day										
100m3 required work days=100(m3)/daily productivity(m3/day)=100/1330=0.08(day)										
Corrected day =0.08/95%=0.08(day)										
Subtotal		100.00	m3				64,865.60			
Per Unit Price		1.00	m3				648.66	0.00	0	

00- 147 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Guard-pipe installation Reference MOCH4 P420

Specification: Metal type(GP-A) Quantity･Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	17 (person) x1.5	25.50	人	12,150			309,825			Lab-21
建込,小運搬,レール取付,充填 路側用										
高欄兼用車両用防護柵	Class_A(SP)	100.00	m			20,000			2,000,000	Mat-105
Subtotal		100.00	m				309,825		2,000,000	
Per Unit Price		1.00	m				3,098	0	20,000	

00-　149　Productivity correction coefficient: Asia　Labour coefficient　Technical　Machine coefficient　none

Item: Temporary Jetty　Reference　H28MLIT P292

Specification: Remove superstructure　Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.8 person *2.5	2.00	人	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	1.6 person *2.5	4.00	人	29,400.30			117,601.20			Lab-8
Welder	0.5 person *2.5	1.25	人	19,440.00			24,300.00			Lab-17
Unskilled Labour	1.4 person *2.5	3.50	人	12,150.00			42,525.00			Lab-21
Crawler crane	100t hang	0.70	day	604,856.00			423,399.20			OPE-42
Barge	1500t	0.70	day	2,498,798.08	0.00	0	1,749,158.65	(0.00)	0	Mac-d(10)
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*2%	0.02	-	465,924.20		0	9,318.48		0	
Subtotal		10.00	t				2,454,502.53			
Per Unit Price		1.00	t				245,450.25	0.00	0	

00- 150 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Temporary Jetty Reference H28MLIT P292

Specification: Remove_deck pannel 0.00 Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5 person *2.5	1.25	人	21,870.00			27,337.50			Lab-1
Scaffolder	1.5 person *2.5	3.75	人	18,270.00			68,512.50			Lab-6
Unskilled Labour	0.7 person *2.5	1.75	人	12,150.00			21,262.50			Lab-21
Crawler crane	100t hang	0.50	day	604,856.00			302,428.00			OPE-42
Barge	1500t	0.50	day	2,498,798.08	0.00	0	1,249,399.04	(0.00)	0	Mac-d(10)
Subtotal		100.00	m2				1,668,939.54			
Per Unit Price		1.00	m2				16,689.40	0.00	0	

00- 151 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Temporary Jetty Reference H28MLIT P292

Specification: Remove_Gurad rail Quantity・Unit: 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.6 person *2.5	1.50	人	21,870.00			32,805.00			Lab-1
Unskilled Labour	2.1 person *2.5	5.25	人	12,150.00			63,787.50			Lab-21
Subtotal		100.00	m				96,592.50			
Per Unit Price		1.00	m				965.93	0.00	0	

00- 152 Productivity correction coefficient: Asia Labour coefficient 機械depending on machine coeffici Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: H400_L=40m_Pile remove_Pulling25m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos / (16 nos / day * 75%)= 0.83	0.833								
Foreman	1person*0.833	0.833	人	21,870.00			18,225.00			Lab-1
Scaffolder	2person*0.833	1.667	人	18,270.00			30,450.00			Lab-6
Unskilled Labour	1person*0.833	0.833	人	12,150.00			10,125.00			Lab-21
Crawler crane	100t hang	0.83	day	604,856.00			504,046.67			OPE-42
Barge	1500t	0.83	day	2,498,798.08	0.00	0	2,082,331.73	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.83	day							OPE-22
Miscellaneous cost	Subtotal×20%	0.20	-	2,645,178.40			529,035.68			
Subtotal		10.00	nos				3,174,214.08			
Per Unit Price		1.00	nos				317,421.41	0.00	0	

00- 153 Productivity correction coefficient: ASIA Labour coefficient Technical Machine coefficient none

Item: Temporary Jetty Reference H28MLIT P296

Specification: Falswork_Remove(Guide, Frame, Wale, Strut) Quantity・Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.2 person *2.5	3.00	人	44,100.00			132,300.00			Lab-2
Skilled Labour for Bridges	2.3 person *2.5	5.75	人	29,400.30			169,051.73			Lab-8
Welder	1.6 person *2.5	4.00	人	19,440.00			77,760.00			Lab-17
Unskilled Labour	1.3 person *2.5	3.25	人	12,150.00			39,487.50			Lab-21
Crawler crane	100t hang	1.40	day	604,856.00			846,798.40			OPE-42
Barge	1500t	1.40	day	2,498,798.08	0.00	0	3,498,317.31	(0.00)	0	Mac-d(10)
Miscellaneous cost	Subtotal×2%	0.02	-	418,599.23			8,371.98			
Subtotal		10.00	t				4,772,086.92			
Per Unit Price		1.00	t				477,208.69	0.00	0	

00- 156 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Form work Reference H15MLIT P276

Specification: Ordinal form Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	3.1*1.5	4.65	person	21,870.00			101,695.50			Lab-1
Form work	15.7*2.5	39.25	person	18,270.00			717,097.50			Lab-18
Unskilled Labour	10*1.5	15.00	person	12,150.00			182,250.00			Lab-21
Miscellaneous cost	22%	0.22		1,001,043.00	0.00	0	220,229.46	0.00	0	
Subtotal		100.00	m2				1,221,272.46			
Per Unit Price		1.00	m2				12,212.72	0.00	0	

00- 157 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Form work Reference H15MLIT P276

Specification: Cylindrical type form Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	4.4*1.5	6.60	person	21,870.00			144,342.00			Lab-1
Form work	20.6*2.5	51.50	person	18,270.00			940,905.00			Lab-18
Unskilled Labour	17.5*1.5	26.25	person	12,150.00			318,937.50			Lab-21
Miscellaneous cost	12%	0.12		1,404,184.50	0.00	0	168,502.14	0.00	0	
Subtotal		100.00	m2				1,572,686.64			
Per Unit Price		1.00	m2				15,726.87	0.00	0	

00- 158 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Scaffolding Reference H28MLIT P273

Specification: Hand rail precede type Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.4*1.5	2.10	person	21,870			45,927			Lab-1
Scaffolder	7.7*1.5	11.55	person	18,270			211,019			Lab-6
Unskilled Labour	1.2*1.5	1.80	person	12,150			21,870			Lab-21
Crawler crane	100t hang	1.40	day	1,744,795.67	0.00	0	2,442,713.94	(0.00)	0	Mac-d(9)
Barge	1500t	1.40	day	2,498,798.08	0.00	0	3,498,317.31	(0.00)	0	Mac-d(10)
Miscellaneous cost	31%	0.31		2,721,529	0	0	843,674	0	0	
Subtotal		100.00	m2				7,063,520.88			
Per Unit Price		1.00	m2				70,635.21	0.00	0	

00- 159 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Bracket support_PKG1 Reference H28MLIT 825

Specification: Pierhead_coping Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bracket type support		78.50	t	1,278,892	0	0	100,393,039	0	0	01-177
Support for overhang section		2,700	m3	37,018	0	0	99,947,574	0	0	01-178
Material for Bracket support	P11,12	2.00	set	13,139,197	0	0	26,278,394	0	0	02-52
Material for Bracket support	P10,13	2.00	set	28,207,827	0	0	56,415,654	0	0	
Subtotal		1.00	LS				283,034,662			
Per Unit Price		1.00	LS				283,034,662	0	0	

00- 160 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Bracket support_PKG2 Reference H28MLIT 825

Specification: Pierhead_coping Quantity･Unit: 9 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bracket type support		212.76	t	1,278,892	0	0	272,097,109	0	0	01-177
Support for overhang section		6,075	m3	37,018	0	0	224,882,042	0	0	01-178
Material for Bracket support	other pier	9.00	set	24,892,836	0	0	224,035,522	0	0	02-54
Subtotal		9.00	set				721,014,672			
Per Unit Price		1.00	set				80,112,741	0	0	

00- 161 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site_Cable stayed bridge Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	124.70	m3	99,456	0	0	12,402,199	0	0	00-51
Rebar work_SD345	Arranging D16-D25	21.821	ton	114,348	0	81,271	2,495,178	0	1,773,414	00-80
Rebar work_SD345	Assembling D16-D25	21.821	nos	128,135	0	0	2,796,025	0	0	00-83
Form work	for ordinal concrete_with&without rebar	89.10	m2	8,785	0	0	782,718	0	0	01-22
Subtotal		1.00	LS				18,476,120		1,773,414	
Per Unit Price		1.00	LS				18,476,120	0	1,773,414	

00- 162 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Accessory&Miscellaneous work Reference

Specification: Cable Stayed Bridge Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Ladder in main tower	Cable stayed bridge	1.00	LS	0	0	1,179,720	0	0	1,179,720	01-201
Inspection way	Cable stayed bridge	1.00	LS	0	0	17,170,888	0	0	17,170,888	01-202
Fairing	Cable stayed bridge	1.00	LS	0	0	23,193,840	0	0	23,193,840	01-203
Water pipe support	Cable stayed bridge	1.00	LS	0	0	4,421,850	0	0	4,421,850	01-204
Subtotal		1.00	LS						45,966,298	
Per Unit Price		1.00	LS				0	0	45,966,298	

00-　163　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item: Accessory&Miscellaneous work　Reference

Specification: Steel box Bridge(PKG2)　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Inspection way	Steel box girder(PKG2)	1.00	LS	0	0	9,535,893	0	0	9,535,893	01-205
Water pipe support	Steel box girder(PKG2)	1.00	LS	0	0	1,479,055	0	0	1,479,055	01-206
Subtotal		1.00	LS						11,014,948	
Per Unit Price		1.00	LS				0	0	11,014,948	

00- 169 Productivity correction coefficient: ASIA Labour coefficient Machine coefficient

Item: Fabrication of precast segment Reference

Specification: Short line matching method Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Standard section										
Concrete for PC box in Yard	Class A	3,460	m3	149,885	0	0	518,600,958	0	0	01-190
Re-bar work_SD345_D10-13	for PC box in yard construction	300.000	t	304,581	0	56,376	91,374,402	0	16,912,800	01-192
Re-bar work_SD345_D16-25	for PC box in yard construction	150.000	t	348,267	0	78,337	52,240,097	0	11,750,504	01-193
Internal prestressing strands(for deck)	Installation_Crossbeam_3 S 12.7	8,943.00	m	4,693	0	768	41,966,995	0	6,872,338	02-175
Internal prestressing strands(for deck)	Presstressing_Crossbeam_3 S 12.7	912	Cable	122,066	0	0	111,324,256	0	0	02-176
Widened section										
Short line matching cast yard instllation										
Concrete foundation of Manufacture equipment		1	L.S	265,818,489	0	804,573	265,818,489	0	804,573	01-215
Equipment of segment fabrication yard		1	L.S	246,294,667	473,525	6,764,559	246,294,667	473,525	6,764,559	01-216
Short line equipment		1	L.S	76,793,397	0	8,630,984	76,793,397	0	8,630,984	01-217
Embedded materials cost of Segment		1	LS	0	0	7,300,986	0	(0.00)	7,300,986.30	02-106
Subtotal		1.00	LS				1,404,413,261	473,525	59,036,744	
Per Unit Price		1.00	LS				1,404,413,261	473,525	59,036,744	

00- 170 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Erection Reference

Specification: Span by Span method Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection girder instration and removal										
Fabrication of erection girder	Including hydroric hanging equipment	1	LS	87,047,444	0	122,524,217	87,047,444		122,524,217	01-220
							0		0	
Bent foundation (on land)	Concrete foundation	140	m3	103,988	0	0	14,558,319		0	01-222
Bent equipment instllation and demolition (on land)	2 time assembly	1	LS	95,727,391	0	0	95,727,391		0	01-223
Erection girder assembly and demolition	for Span by Sapn method	2	set	47,262,325	0	0	94,524,649		0	01-224
Erection of Segment										
Movement and instllation of SBS girder	to next span	8	time	5,844,605	0	0	46,756,836		0	01-225
Segment erection		160	SEG	860,444	0	40,276	137,671,058		6,444,133	01-227
Segment connection		1	LS	32,520,842	0	721,546	32,520,842		721,546	01-228
Transportation										
Standard section										
Transportation in site	Special trailer 60 t	7.00	month	13,594,952	0	0	95,164,663		0	01-213
	* 7/9 month here, 2/9 month is in PKG1-56									
Subtotal		1.00	LS				603,971,201		129,689,896	
Per Unit Price		1.00	LS				603,971,201	0	129,689,896	

00- 171 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Prestressing Reference

Specification: Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
External prestressing strands	Type 19 S 15.2	1	LS	92,544,137	0	63,157,574	92,544,137	0	63,157,574	01-229
Internal prestressing strands	Type 12 S 15.2	1	LS	109,253,190	0	18,261,589	109,253,190	0	18,261,589	01-230
Internal prestressing strands(for deck)	Type 3 S 12.7	1	LS	13,447,663	0	603,011	13,447,663	0	603,011	01-231
Internal prestressing strands(for crossbeam)	Type 4 S 15.2 (Horizontal)	1	LS	6,403,632	0	181,710	6,403,632	0	181,710	01-233
Prestressing steel bar (for crossbeam)	D32 (Vertical prestressing)	1	LS	45,979,170	0	2,922,480	45,979,170	0	2,922,480	01-234
Subtotal		1.00	LS				267,627,792		85,126,364	
Per Unit Price		1.00	LS				267,627,792	0	85,126,364	

00-　172　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item: Bearing setting　Reference

Specification: PC Box(PKG1)　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber_bearing										
Bearing setting	Rubber Bearing_Separat perform type	24.00	nos	792,138	0	0	19,011,307	0	0	01-237
Bearing for PC box girder	for A1	4.00	nos	0	42,390	0	0	169,560	0	Mat-375
Bearing for PC box girder	for P1	4.00	nos	0	76,508	0	0	306,032	0	Mat-376
Bearing for PC box girder	for P2	4.00	nos	0	71,206	0	0	284,825	0	Mat-377
Bearing for PC box girder	for P3	4.00	nos	0	71,206	0	0	284,825	0	Mat-378
Bearing for PC box girder	for P4	4.00	nos	0	76,508	0	0	306,032	0	Mat-379
Bearing for PC box girder	for P5	4.00	nos	0	39,412	0	0	157,648	0	Mat-380
										Mat-381
										Mat-382
										Mat-383
										Mat-384
										Mat-385
										Mat-386
										Mat-387
Subtotal		1.00	LS				19,011,307	1,508,922		
Per Unit Price		1.00	LS				19,011,307	1,508,922	0	

00-　173　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Expansion joint setting　Reference　H24MLIT P216

Specification: PC Box　Quantity・Unit: 1 本

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Modular type	for PC box_A1	1.00	nos	2,343,822	0	25,065,000	2,343,822	0	25,065,000	01-241
Subtotal		1.00	本				2,343,822		25,065,000	
Per Unit Price		1.00	本				2,343,822	0	25,065,000	

00-　174

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier Fabrication

Reference H28国基 PIV-7-1-1

Specification : PC-I-girder_Ramp

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		132.68	nos			26,900			3,569,151	
G	13.821ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	10.307	ton	0	0	81,000	0	0	834,840	Mat-253
SS400	L300	1.799	ton	0	0	72,900	0	0	131,132	Mat-151
M16*40		0.055	ton	0	0	1,342,640	0	0	74,407	
Hot-Dip Galvanization	HDZ55	13.82	t			55,800			771,215	Mat-415
Rebar work_SD345	Arranging D16-D25	1.425	ton	114,348	0	81,271	162,913	0	115,788	00-80
Rebar work_SD345	Assembling D16-D25	1.425	ton	128,135	0	0	182,555	0	0	00-83
Subtotal		1.00	LS				345,468		5,496,532	
Per Unit Price		1.00	LS				345,468	0	5,496,532	

00-　175

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier Fabrication

Reference H28国基 PIV-7-1-1

Specification : PC box

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		573.93	nos			26,900			15,438,651	
G	59.784ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	44.582	ton	0	0	81,000	0	0	3,611,169	Mat-253
SS400	L300	7.781	ton	0	0	72,900	0	0	567,221	Mat-151
M16*40		0.240	ton	0	0	1,342,640	0	0	321,853	
Hot-Dip Galvanization	HDZ55	59.78	t			55,800			3,335,954	Mat-415
Rebar work_SD345	Arranging D16-D25	6.163	ton	114,348	0	81,271	704,692	0	500,850	00-80
Rebar work_SD345	Assembling D16-D25	6.163	ton	128,135	0	0	789,657	0	0	00-83
Subtotal		1.00	LS				1,494,349		23,775,698	
Per Unit Price		1.00	LS				1,494,349	0	23,775,698	

00- 176 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Drainage work Reference H25MLIT P880

Specification: PC box Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Catch Basin Fabrication	0	26.00	nos	2,182	0	53,767	56,741	0	1,397,943	01-136
Anchor bolt setting for concrete			nos	1,205	0	205	0	0	0	01-137
Drainage Pipe Installation	PVC pipe	418.40	m	35,687	0	0	14,931,265	0	0	01-176
Catch basin setting		26.00	nos	11,522	0	0	299,568	0	0	01-138
Subtotal		1.00	LS				15,287,574		1,397,943	
Per Unit Price		1.00	LS				15,287,574	0	1,397,943	

00- 177 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Manhole Reference JST

Specification: PC box Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fabrication	Y5=G*g*(1+a)	0.41	nos			26,900			10,919	
G	0.045ton									
g	9.0person/ton									
a	0									
Material										
L	SS400_50*50*6	0.01	ton	0.00	0.00	63,900.00	0.00	(0.00)	696.51	Mat-193
PL	6.0<=t<=70mm	0.03	ton	0.00	0.00	79,200.00	0.00	(0.00)	2,494.80	Mat-198
RB	φ22	0.003	ton	0.00	0.00	80,100.00	0.00	(0.00)	216.27	Mat-237
Hole in anchor		12.000	nos	8,000.00			96,000.00			
Hinge		10.000	nos	10,000.00			100,000.00			
Hot-Dip Galvanization	HDZ55	0.05	t			55,800			2,517	Mat-415
Installation										
Foreman for Bridges		0.10	person	44,100			4,410			Lab-2
Unskilled Labour		2.00	person	12,150			24,300			Lab-21
Subtotal		1.00	set				224,710		16,843	
Per Unit Price		1.00	set				224,710	0	16,843	

00- 178 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Bearing Reference

Specification: PC Box(PKG2) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber_bearing										
Bearing setting	Rubber Bearing_Separat perform type	28.00	nos	792,138	0	0	22,179,858	0	0	01-237
										Mat-375
										Mat-376
										Mat-377
										Mat-378
										Mat-379
										Mat-380
Bearing for PC box girder	for P20	4.00	nos	0	42,390	0	0	169,560	0	Mat-381
Bearing for PC box girder	for P21	4.00	nos	0	76,508	0	0	306,032	0	Mat-382
Bearing for PC box girder	for P22	4.00	nos	0	76,508	0	0	306,032	0	Mat-383
Bearing for PC box girder	for P23	4.00	nos	0	71,206	0	0	284,825	0	Mat-384
Bearing for PC box girder	for P24	4.00	nos	0	76,508	0	0	306,032	0	Mat-385
Bearing for PC box girder	for P25	4.00	nos	0	81,671	0	0	326,682	0	Mat-386
Bearing for PC box girder	for A2	4.00	nos	0	43,618	0	0	174,470	0	Mat-387
Subtotal		1.00	LS				22,179,858	1,873,634		
Per Unit Price		1.00	LS				22,179,858	1,873,634	0	

00- 179 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Facilities and Concrete Base for Reassembling Yard Reference

Specification: (Package-1) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rail installation&remove	30 kg / m rail (2 parallel rails)	940.00	m	23,441	0.0	0	22,034,916	0.0	0	01-150
Equipment										
Winch	9.8 kN(1.0t) * 4 nos	1,680	day			1,630			2,738,400	CEDC-18
Carriage	60 t * 8 nos	3,360	day			2,320			7,795,200	CEDC-18
Carriage	120 t * 1 nos	420	day			26,700			11,214,000	CEDC-18
Jack	50 t, 20 mm stroke * 20 nos	8,400	day			996			8,366,400	CEDC-18
Pump (manual type) HPW-5	4 nos	1,680	day			820			1,377,600	Quatation
Base concrete	For stock yard under planned alignment	147.00	m3	103,988	0	0	15,286,235	0	0	02-64
Subtotal		1.00	LS				37,321,150.53		31,491,600	
Per Unit Price		1.00	LS				37,321,150.53	0.00	31,491,600	

00- 180

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier Fabrication

Reference H28国基 PIV-7-1-1

Specification : on Mechanically Stabilized Earth Wall

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		58.42	nos			26,900			1,571,533	
G	6.086ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	4.538	ton	0	0	81,000	0	0	367,589	Mat-253
SS400	L300	0.792	ton	0	0	72,900	0	0	57,739	Mat-151
M16*40		0.024	ton	0	0	1,342,640	0	0	32,762	
Hot-Dip Galvanization	HDZ55	6.09	t			55,800			339,574	Mat-415
Rebar work_SD345	Arranging D16-D25	0.627	ton	114,348	0	81,271	71,732	0	50,983	00-80
Rebar work_SD345	Assembling D16-D25	0.627	ton	128,135	0	0	80,381	0	0	00-83
Subtotal		1.00	LS				152,113		2,420,179	
Per Unit Price		1.00	LS				152,113	0	2,420,179	

00-　181　　Productivity correction coefficient: Asia　　Labour coefficient　　Machine coefficient

Item: Erection of main girder　　Reference

Specification: by erection nose for Main span(1 set)　　Quantity･Unit: 1 each

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection girder instration and removal										
Fabrication of erection girder	Cable stayed bridge	1	set	0	0.0	71,932,984	0	0.0	71,933,000	01-100
Erection girder assembly and demolition	Cable stayed bridge	1	LS	36,372,140	0.0	0	36,370,000	0.0	0	01-102
Erection of Segment										
Segment erection		11	SEG	672,755	0.0	12,204	7,400,000	0.0	134,000	01-110
Movement and instllation of Erection nose	to next segment	10	time	3,339,774	0.0	0	33,400,000	0.0	0	01-116
Scaffolding	Main span	1	LS	0	0.0	16,609,152	0	0.0	16,609,000	01-112
Fall prevention and Scaffolding for ascending piers	Main span	1	set	0	0.0	2,857,920	0	0.0	2,858,000	01-113
Subtotal		1.00	each				77,170,000		91,534,000	
Per Unit Price		1.00	each				77,170,000	0.0	91,534,000	

00- 182

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Pier Head Cast in Place_temporary expense

Reference

Specification: on river portion

Quantity・Unit: 1 pier

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bracket support and scaffold										
Bracket support main part		23.64	t	417,398	0	0	9,867,298	0	0	01-250
Segment Support on a bracket		122.40	m3	14,254	0	0	1,744,631	0	0	01-251
PC steel bar (Vertical)	ϕ32 (2.5m) and anchorage	1.00	pier	1,099,402	0	113,107	1,099,402	0	113,107	01-252
PC steel bar(Horizontal for segment connection)	ϕ32 (6.0m) and anchorage	1.00	pier	2,068,636	0	260,520	2,068,636	0	260,520	01-253
Subtotal		1.00	pier				14,779,967		373,627	
Per Unit Price		1.00	pier				14,779,967	0	373,627	

00-　183　Productivity correction coefficient:　Labour coefficient　none　Machine coefficient　General

Item:　Sheet pile driving　Reference　H24MLIT P301

Specification:　Nmax<50,Type II,shorter than 9m　Quantity・Unit:　10　nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/38/85% (person)	0.31	person	21,870.00			6,770.90			Lab-1
Scaffolder	2.0×10/38/85% (person)	0.62	person	18,270.00			11,312.69			Lab-6
Unskilled Labour	1.0×10/38/85% (person)	0.31	person	12,150.00			3,761.61			Lab-21
クローラクレーン運転 油圧式50-55t吊		0.31	日	297,147.20			91,996.04			OPE-26
バイブロハンマ機械費	60kW	0.31	日	53,298.00	227.29		16,500.93	(70.37)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×22%	0.22	-	130,342.17			28,675.28			
Subtotal		10.00	nos				159,017.45	70.37		
Per Unit Price		1.00	nos				15,901.75	7.04	0	

00- 184 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Sheet pile pulling Reference H24MLIT P301

Specification: Nmax<50,shorter than 9m Quantity・Unit: 10 枚

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/58/85% (person)	0.20	person	21,870.00			4,436.11			Lab-1
Scaffolder	2.0×10/58/85% (person)	0.41	person	18,270.00			7,411.76			Lab-6
Unskilled Labour	1.0×10/58/85% (person)	0.20	person	12,150.00			2,464.50			Lab-21
クローラクレーン運転 油圧式50-55t吊		0.20	day	297,147.20			60,273.27			OPE-26
バイブロハンマ機械費	60kW	0.20	day	53,298.00	227.29		10,810.95	(46.10)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×19%	0.19	-	85,396.59			16,225.35			
Subtotal		10.00	枚				101,621.94	46.10		
Per Unit Price		1.00	枚				10,162.19	4.61	0	

00- 185 Productivity correction coefficient: Labour coefficient none Machine coefficient General

Item: Sheet pile driving Reference H24MLIT P301

Specification: Nmax<50,Type V,shorter than 25m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/38/85% (person)	0.90	person	21,870.00			19,791.86			Lab-1
Scaffolder	2.0×10/38/85% (person)	1.81	person	18,270.00			33,067.87			Lab-6
Unskilled Labour	1.0×10/38/85% (person)	0.90	person	12,150.00			10,995.48			Lab-21
クローラクレーン運転 油圧式50-55t吊		0.90	day	297,147.20			268,911.49			OPE-26
バイブロハンマ機械費	60kW	0.90	day	53,298.00	227.29		48,233.48	(205.69)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×22%	0.22	-	381,000.18			83,820.04			
Subtotal		10.00	nos				464,820.22	205.69		
Per Unit Price		1.00	nos				46,482.02	20.57	0	

00- 186 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Sheet pile pulling Reference H24MLIT P301

Specification: Nmax<50,shorter than 25m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0×10/30/85% (person)	0.39	person	21,870.00			8,576.47			Lab-1
Scaffolder	2.0×10/30/85% (person)	0.78	person	18,270.00			14,329.41			Lab-6
Unskilled Labour	1.0×10/30/85% (person)	0.39	person	12,150.00			4,764.71			Lab-21
クローラクレーン運転 油圧式50-55t吊		0.39	day	297,147.20			116,528.31			OPE-26
バイブロハンマ機械費	60kW	0.39	day	53,298.00	227.29		20,901.18	(89.13)		OPE-58
Miscellaneous cost	Subtotal of Labour cost, operation cost ×19%	0.19	-	165,100.08			31,369.02			
Subtotal		10.00	nos				196,469.10	89.13		
Per Unit Price		1.00	nos				19,646.91	8.91	0	

00- 187 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Base course leveling(Only compaction without material) Reference H24MLIT P495

Specification: Subbase t=200mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Motor grader	3.1m	0.11	day	324,440.00			34,368.64			OPE-16
Road roller	10-12t	0.11	day	226,584.00			24,002.54			OPE-18
Tire roller	8-20t	0.11	day	270,040.00			28,605.93			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,893.11		0	8,090.38		0	
Maximun t of 1 layer =200mm, 1Layer in total										
Daily productivity =1,110(m2/day/layer)*95%=944m2										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/944×1=0.11(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				97,983.49			
Per Unit Price		1.00	m2				979.83	0.00	0	

00- 188 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: TypeA Reference

Specification: Concrete_t:10cm_Class E Quantity･Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe･ Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,879.92			
Per Unit Price		1.00	m3				103,987.99	0.00	0	

00- 189 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: TypeB Reference H24MLIT P500

Specification: Binder course t=50mm,施工幅3m超 Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870.00			1,118.67			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580.00			2,237.34			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150.00			3,728.90			Lab-21
Asphalt mix	Heated asphalt	5.99	m3	166,027.50			993,990.83			Mat-70
										Mat-68
Asphalt finisher	Wheel type 2.4-4.5m	0.05	day	511,816.00			24,085.46			OPE-1
Road roller	10-12t	0.05	day	226,584.00			10,662.78			OPE-18
Tire roller	8-20t	0.05	day	270,040.00			12,707.76			OPE-5
Miscellaneous cost	Subtotal of Labour, machine, and operation×19%	0.19	-	54,540.91			10,362.77			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.05(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=5.99(m3)										
Miscellaneous cost is for other sub-equipment etc										
Subtotal		100.00	m2				1,058,894.51			
Per Unit Price		1.00	m2				10,588.95	0.00	0	

00- 190 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: TypeC Reference H24MLIT P495

Specification: Crushed stone_t:15cm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Subbase course material	=0.15 m*100 m2* 1.27	19.05	m3	11,124.14			211,914.87			
Motor grader	3.1m	0.11	day	324,440.00			34,368.64			OPE-16
Road roller	10-12t	0.11	day	226,584.00			24,002.54			OPE-18
Tire roller	8-20t	0.11	day	270,040.00			28,605.93			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,893.11		0	8,090.38		0	
Maximun t of 1 layer =200mm, 1Layer in total										
Daily productivity =1,110(m2/day/layer)*85%=944m2										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/944×1=0.11(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				309,898.36			
Per Unit Price		1.00	m2				3,098.98	0.00	0	

00- 191 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Temporary road Reference

Specification: Type A Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=150mm	100	m2	4,492.07	0.00	0	449,207.00	0.00	0	00-6
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=50mm W>=3m, including prime coat	100	m2	11,382.75	0.00	0	1,138,275.00	0.00	0	00-9
Subtotal		100.00	m2				2,738,035.00			
Per Unit Price		1.00	m2				27,380.35	0.00	0	

00- 192 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Temporary road Reference

Specification: Type B Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=150mm	100	m2	4,492.07	0.00	0	449,207.00	0.00	0	00-6
Road base Subbase coarse	for Lane and shouldert=150mm	100	m2	3,099.49	0.00	0.00	309,949.00	0.00	0	00-7
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=50mm W>=3m, including prime coat	100	m2	11,382.75	0.00	0	1,138,275.00	0.00	0	00-9
Subtotal		100.00	m2				3,047,984.00			
Per Unit Price		1.00	m2				30,479.84	0.00	0	

00-　193　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Temporary road　Reference

Specification: Type C　Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=200mm	100	m2	6,611.20	0.00	0.00	661,120.00	0.00	0	00-194
Road base Subbase coarse	for Lane and shouldert=200mm	100	m2	3,805.87	0.00	0.00	380,587.00	0.00	0	00-195
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=100mm W>=3m, including prime coat	100	m2	21,322.65	0.00	0.00	2,132,265.00	0.00	0	00-196
Subtotal		100.00	m2				4,324,525.00			
Per Unit Price		1.00	m2				43,245.25	0.00	0	

00- 194 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Base course t=200mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Base course material		25.40	m3	18,434.29			468,230.97			Mat-52
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	176,962.41		0	15,926.62		0	
100m2 requires Base course material amount =100m2×0.2m×(1+0.27)=25.40(m3)										
Maximun t of 1 layer =150mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110×0.85=0.105(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				661,120.00			
Per Unit Price		1.00	m2				6,611.20	0.00	0	

00- 195 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Subbase courset=200mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Subbase course material		25.40	m3	11,124.14			282,553.16			Mat-51
Motor grader	3.1m	0.11	day	324,440.00			34,386.86			OPE-16
Road roller	10-12t	0.11	day	226,584.00			24,015.26			OPE-18
Tire roller	8-20t	0.11	day	270,040.00			28,621.09			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,939.21		0	8,094.53		0	
100m2 requires Subbase course material amount =100m2×0.2m×(1+0.27)=25.4(m3)										
Maximun t of 1 layer =200mm, 1Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110×0.85=0.105(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				380,586.90			
Per Unit Price		1.00	m2				3,805.87	0.00	0	

00- 196 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Pavement Reference H24MLIT P500

Specification: Binder course t=100mm W>=3m, including prime coat Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870.00			1,118.67			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580.00			2,237.34			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150.00			3,728.90			Lab-21
Asphalt mix	Heated asphalt	11.97	m3	166,027.50			1,987,981.66			Mat-70
Bitumin material	Prime coat 126l=126kg	126	kg	630.00			79,380.00			Mat-68
Asphalt finisher	Wheel type 2.4-4.5m	0.05	day	511,816.00			24,085.46			OPE-1
Road roller	10-12t	0.05	day	226,584.00			10,662.78			OPE-18
Tire roller	8-20t	0.05	day	270,040.00			12,707.76			OPE-5
Miscellaneous cost	Subtotal of Labour, machine, and operation×19%	0.19	-	54,540.91			10,362.77			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.10(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=11.97(m3)										
Miscellaneous cost is for other sub-equipment etc										
Subtotal		100.00	m2				2,132,265.34			
Per Unit Price		1.00	m2				21,322.65	0.00	0	

00- 197

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Diversion road

Reference

Specification: Section-1

Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0.00	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=200mm	100	m2	6,611.20	0.00	0.00	661,120.00	0.00	0	00-194
Road base Subbase coarse	for Lane and shouldert=200mm	100	m2	3,805.87	0.00	0.00	380,587.00	0.00	0	00-195
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0.00	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=100mm W>=3m, including prime coat	100	m2	21,322.65	0.00	0.00	2,132,265.00	0.00	0	00-196
Road base Subbase coarse	for Lane and shouldert=200mm*5 layers	500	m2	3,805.87	0.00	0.00	1,902,935.00	0.00	0	00-195
Subtotal		100.00	m2				6,227,460.00			
Per Unit Price		1.00	m2				62,274.60	0.00	0	

00- 198

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Diversion road

Reference

Specification: Section-2

Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0.00	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=200mm	100	m2	6,611.20	0.00	0.00	661,120.00	0.00	0	00-194
Road base Subbase coarse	for Lane and shouldert=200mm	100	m2	3,805.87	0.00	0.00	380,587.00	0.00	0	00-195
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0.00	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=100mm W>=3m, including prime coat	100	m2	21,322.65	0.00	0.00	2,132,265.00	0.00	0	00-196
Cement stabilization		616	m3	4,573.50	0.00	0.00	2,817,276.00	0.00	0	00-15
Cement material	Flexible container bag	36.96	ton	84,600.00			3,126,816.00			Mat-166
Subtotal		100.00	m2				10,268,617.00			
Per Unit Price		1.00	m2				102,686.17	0.00	0	

00- 199

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Diversion road

Reference

Specification: Section-3

Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pavement_Levelling	Roadbed & subgrade	100	m2	596.58	0.00	0.00	59,658.00	0.00	0	00-5
Road base Base coarse	for Lane and shouldert=200mm	100	m2	6,611.20	0.00	0.00	661,120.00	0.00	0	00-194
Road base Subbase coarse	for Lane and shouldert=200mm	100	m2	3,805.87	0.00	0.00	380,587.00	0.00	0	00-195
Pavement	Surface course t=50mmW>=3.0m, including tack coat	100	m2	10,908.95	0.00	0.00	1,090,895.00	0.00	0	00-8
Pavement	Binder course t=100mm W>=3m, including prime coat	100	m2	21,322.65	0.00	0.00	2,132,265.00	0.00	0	00-196
Road base Subbase coarse	for Lane and shouldert=200mm*5 layers	500	m2	3,805.87	0.00	0.00	1,902,935.00	0.00	0	00-195
Subtotal		100.00	m2				6,227,460.00			
Per Unit Price		1.00	m2				62,274.60	0.00	0	

00- 200 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Temprary Jetty No.1 Reference

Specification: Material Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-Beam (H-400x400x13x12)		1,148.07	t	0.00	0.00	69,300	0	0	79,560,946	Mat-169
H-Beam (H-300x300x10x15)		0.16	t	0.00	0.00	64,800	0	0	10,233	Mat-176
H-Beam (H-488x300x11x18)		0.00	t	0.00	0.00	66,600	0	0	0	Mat-171
H-Beam (H-800x300x14x26)		108.36	t	0.00	0.00	75,600	0	0	8,192,016	Mat-188
C-Channel Materials										
C-Channel (C-150x75x6.5x10)		77.52	t	0.00	0.00	63,900	0	0	4,953,835	Mat-206
C-Channel (C-300x90x9x13)		4877%	t	0.00	0.00	66,600	0	0	3,247,949	Mat-207
C-Channel Materials (C-380x100x10.5x16)		11.60	t	0.00	0.00	68,400	0	0	793,276	Mat-208
Angle Bar Materials										
Angle Bar Materials (L-100x100x10)		126.88	t	0.00	0.00	68,400	0	0	8,678,351	Mat-191
FB Materials										
FB Material (FB-140x300x12)		0.02	t	0.00	0.00	103,500	0	0	2,484	これな
Bolts & Nuts Materials										
M22 (F 10 T) 85		13540	t	0.00	0.00	128	0	0	1,730,412	Mat-221
Metal Deck Materials										
Metal Deck Material (2000x1000x200)		0.00	t	0.00	0.00	104,651	0	0	0	Mat-213
Metal Deck Material (4000x2000x200)		229.01	t	0.00	0.00	104,651	0	0	23,965,953	Mat-214
Depreciation	70%	(0.70)		0.00	0.00	###########	0	0	(91,794,819)	
Subtotal		1.00	LS						39,340,636	
Per Unit Price		1.00	LS				0	0	39,340,636	

00-　201　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item: Temprary Jetty No.2　Reference

Specification: Material　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-Beam (H-400x400x13x12)		616.28	t	0.00	0.00	69,300	0	0	42,708,204	Mat-169
H-Beam (H-300x300x10x15)		0.16	t	0.00	0.00	64,800	0	0	10,233	Mat-176
H-Beam (H-488x300x11x18)		59.26	t	0.00	0.00	66,600	0	0	3,946,716	Mat-171
H-Beam (H-800x300x14x26)		12.60	t	0.00	0.00	75,600	0	0	952,560	Mat-188
C-Channel Materials										
C-Channel (C-150x75x6.5x10)		28.64	t	0.00	0.00	63,900	0	0	1,830,096	Mat-206
C-Channel (C-300x90x9x13)		28.61	t	0.00	0.00	66,600	0	0	1,905,426	Mat-207
C-Channel Materials (C-380x100x10.5x16)		2.49	t	0.00	0.00	68,400	0	0	170,316	Mat-208
Angle Bar Materials										
Angle Bar Materials (L-100x100x10)		32.50	t	0.00	0.00	68,400	0	0	2,223,000	Mat-191
FB Materials										
FB Material (FB-140x300x12)		0.02	t	0.00	0.00	103,500	0	0	2,484	これな
Bolts & Nuts Materials										
M22 (F 10 T) 85		4752	set	0.00	0.00	128	0	0	607,306	Mat-221
Metal Deck Materials										
Metal Deck Material (2000x1000x200)		171.76	t	0.00	0.00	104,651	0	0	17,974,884	Mat-213
Metal Deck Material (4000x2000x200)			t	0.00	0.00	104,651	0	0	0	Mat-214
Depreciation	70%	(0.70)		0.00	0.00	29,612,788.00	0	0	(20,728,952)	
Subtotal		1.00	LS						51,602,273	
Per Unit Price		1.00	LS				0	0	51,602,273	

00- 202 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Inclined Jetty Reference

Specification: Material Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-400x400x13x21		184.47	t	0.00	0.00	69,300	0	0	12,783,771	Mat-169
H-500x300x11x18		18.11	t	0.00	0.00	66,600	0	0	1,206,126	Mat-172
H-500x300x11x18		3.90	t	0.00	0.00	66,600	0	0	259,740	Mat-172
C-Channel Materials										
C-Channel (C-150x75x6.5x10)		5.32	t	0.00	0.00	63,900	0	0	339,948	Mat-206
Winch	9.8kN (1.0t)	2.000	nos	0.00	0.00	0	0	0	0	Mat-263
Steel Approaching Board	(L)19.0x(B)4.0x(H)0.3m	8.43	t	0.00	0.00	0.00				Mat-262
Depreciation	70%	(0.70)		0.00	0.00	14,589,585.00	0	0	(10,212,710)	
Subtotal		1.00	LS						4,376,875	
Per Unit Price		1.00	LS				0	0	4,376,875	

00- 203 Productivity correction coefficient: Labour coefficient depending on machine coefficient Machine coefficient General

Asia

Item: Temporary Jetty Reference H28MLIT P298

Specification: H400_L=22.7m_Pile install_Driving_20m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 6 nos / day * 75%	4.50	nos/day							
Foreman	1 person * (10 nos / daily productivity)	2.22	person	21,870.00			48,600.00			Lab-1
Scaffolder	2 person * (10 nos / daily productivity)	4.44	person	18,270.00			81,200.00			Lab-6
Unskilled Labour	1 person * (10 nos / daily productivity)	2.22	person	12,150.00			27,000.00			Lab-21
Crawler crane	100t hang	2.22	day	604,856.00			1,344,124.44			OPE-42
Barge	1500t	2.22	day	2,498,798.08	0.00	0	5,552,884.62	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	2.22	day							OPE-22
Generator	250kVA	2.22	day	1,058,950.01			2,353,222.24			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	9,407,031.30	0.00	0	1,881,406.26	(0.00)	0	
Subtotal		10.00	nos				11,288,437.56			
Per Unit Price		1.00	nos				1,128,843.76	0.00	0	

00- 204 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)Install_Driving_below10m H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/17 nos/day* 75%	0.784								
Foreman	1person*0.78	0.784	person	21,870.00			17,152.94			Lab-1
Scaffolder	2person*0.78	1.569	person	18,270.00			28,658.82			Lab-6
Unskilled Labour	1person*0.78	0.784	person	12,150.00			9,529.41			Lab-21
Crawler crane	100t hang	0.784	day	604,856.00			474,396.86			OPE-42
Barge	1500t	0.784	day	2,498,798.08	0.00	0	1,959,841.63	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.78	day							OPE-22
Generator	250kVA	0.78	day	1,058,950.01			830,549.03			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	3,320,128.69	0.00	0	664,025.74	(0.00)	0	
Material cost is included into "Miscellaneous cost of Guide frame"										
Subtotal		10.00	nos				3,984,154.43			
Per Unit Price		1.00	nos				398,415.44	0.00	0	

00- 205 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)Remove_Pulling_below10m_H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/(30 nos/day * 75%)	0.44								
Foreman	1person*0.44	0.44	person	21,870.00			9,720.00			Lab-1
Scaffolder	2person*0.44	0.89	person	18,270.00			16,240.00			Lab-6
Unskilled Labour	1person*0.44	0.44	person	12,150.00			5,400.00			Lab-21
Crawler crane	100t hang	0.44	day	604,856.00			268,824.89			OPE-42
Barge	1500t	0.44	day	2,498,798.08	0.00	0	1,110,576.92	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.44	day							OPE-22
Generator	250kVA	0.44	day	1,058,950.01			470,644.45			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	1,881,406.26	0.00	0	376,281.25	(0.00)	0	
Subtotal		10.00	nos				2,257,687.51			
Per Unit Price		1.00	nos				225,768.75	0.00	0	

00- 206 Productivity correction coefficient: Asia Labour coefficient 機械depending on machine coeffici Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: H400_L=22.7m_Pile remove_Pulling_20m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos / (19 nos / day * 75%)	0.702								
Foreman	1person*0.833	0.702	person	21,870.00			15,347.37			Lab-1
Scaffolder	2person*0.833	1.404	person	18,270.00			25,642.11			Lab-6
Unskilled Labour	1person*0.833	0.702	person	12,150.00			8,526.32			Lab-21
Crawler crane	100t hang	0.70	day	604,856.00			424,460.35			OPE-42
Barge	1500t	0.70	day	2,498,798.08	0.00	0	1,753,542.51	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.70	day							OPE-22
Generator	250kVA	0.70	day	1,058,950.01			743,122.81			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	2,970,641.47	0.00	0	594,128.29	(0.00)	0	
Subtotal		10.00	nos				3,564,769.76			
Per Unit Price		1.00	nos				356,476.98	0.00	0	

00- 207 Productivity correction coefficient: Labour coefficient depending on machine coefficient Machine coefficient General

Asia

Item: Temporary Jetty Reference H28MLIT P298

Specification: H400_L=27.5m_Pile install_Driving_20m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 6 nos / day * 75%	4.50	nos/day							
Foreman	1 person * (10 nos / daily productivity)	2.22	person	21,870.00			48,600.00			Lab-1
Scaffolder	2 person * (10 nos / daily productivity)	4.44	person	18,270.00			81,200.00			Lab-6
Unskilled Labour	1 person * (10 nos / daily productivity)	2.22	person	12,150.00			27,000.00			Lab-21
Crawler crane	100t hang	2.22	day	604,856.00			1,344,124.44			OPE-42
Barge	1500t	2.22	day	2,498,798.08	0.00	0	5,552,884.62	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	2.22	day							OPE-22
Generator	250kVA	2.22	day	1,058,950.01			2,353,222.24			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	9,407,031.30	0.00	0	1,881,406.26	(0.00)	0	
Subtotal		10.00	nos				11,288,437.56			
Per Unit Price		1.00	nos				1,128,843.76	0.00	0	

00- 208 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)Istallation_Driving_Below10m_H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/17 nos/day* 75%	0.784								
Foreman	1person*0.78	0.784	person	21,870.00			17,152.94			Lab-1
Scaffolder	2person*0.78	1.569	person	18,270.00			28,658.82			Lab-6
Unskilled Labour	1person*0.78	0.784	person	12,150.00			9,529.41			Lab-21
Crawler crane	100t hang	0.784	day	604,856.00			474,396.86			OPE-42
Barge	1500t	0.784	day	2,498,798.08	0.00	0	1,959,841.63	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.78	day							OPE-22
Generator	250kVA	0.78	day	1,058,950.01			830,549.03			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	3,320,128.69	0.00	0	664,025.74	(0.00)	0	
Material cost is included into "Miscellaneous cost of Guide frame"										
Subtotal		10.00	nos				3,984,154.43			
Per Unit Price		1.00	nos				398,415.44	0.00	0	

00- 209 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: Guide(Pile)Remove_pulling_below10m_H300 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos/(30 nos/day * 75%)	0.44								
Foreman	1person*0.44	0.44	person	21,870.00			9,720.00			Lab-1
Scaffolder	2person*0.44	0.89	person	18,270.00			16,240.00			Lab-6
Unskilled Labour	1person*0.44	0.44	person	12,150.00			5,400.00			Lab-21
Crawler crane	100t hang	0.44	day	604,856.00			268,824.89			OPE-42
Barge	1500t	0.44	day	2,498,798.08	0.00	0	1,110,576.92	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.44	day							OPE-22
Generator	250kVA	0.44	day	1,058,950.01			470,644.45			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	1,881,406.26	0.00	0	376,281.25	(0.00)	0	
Subtotal		10.00	nos				2,257,687.51			
Per Unit Price		1.00	nos				225,768.75	0.00	0	

00- 210 Productivity correction coefficient: Asia Labour coefficient 機械depending on machine coeffici Machine coefficient General

Item: Temporary Jetty Reference H28MLIT P298

Specification: H400_L=27.5m_Pile remove_Pulling_20m Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	=10 nos / (19 nos / day * 75%)	0.702								
Foreman	1person*0.833	0.702	person	21,870.00			15,347.37			Lab-1
Scaffolder	2person*0.833	1.404	person	18,270.00			25,642.11			Lab-6
Unskilled Labour	1person*0.833	0.702	person	12,150.00			8,526.32			Lab-21
Crawler crane	100t hang	0.70	day	604,856.00			424,460.35			OPE-42
Barge	1500t	0.70	day	2,498,798.08	0.00	0	1,753,542.51	(0.00)	0	Mac-d(10)
Vibro Hammer	90kw	0.70	day							OPE-22
Generator	250kVA	0.70	day	1,058,950.01			743,122.81			OPE-54
Miscellaneous cost	Subtotal×20%	0.20	-	2,970,641.47	0.00	0	594,128.29	(0.00)	0	
Subtotal		10.00	nos				3,564,769.76			
Per Unit Price		1.00	nos				356,476.98	0.00	0	

00- 211 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D13 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD390	D10-13, deformed bar	1.055	ton	0.00	0.00	0	0.00	(0.00)	0	Mat-283
Subtotal		1.00	ton				84,088.80			
Per Unit Price		1.00	ton				84,088.80	0.00	0	

00- 212 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D16-D25 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	0.9x2.5	2.25	person	18,270.00			41,107.50			Lab-15
Unskilled Labour	0.6x2.5	1.50	person	12,150.00			18,225.00			Lab-21
Miscellaneous cost		0.02	-	70,267.50			1,405.35			
Material	Loss amount is counted									
Re-bar_SD390	D16-25, deformed bar	1.055	ton	40,449.97	0.00	75,234	42,674.72	(0.00)	79,372	Mat-284
Subtotal		1.00	ton				114,347.57		79,372	
Per Unit Price		1.00	ton				114,347.57	0.00	79,372	

00- 213 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D29-D32 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.1x2.5	0.25	person	21,870.00			5,467.50			Lab-1
Rebar work	0.5x2.5	1.25	person	18,270.00			22,837.50			Lab-15
Unskilled Labour	0.3x2.5	0.75	person	12,150.00			9,112.50			Lab-21
Miscellaneous cost		0.02	-	37,417.50			748.35			
Material	Loss amount is counted									
Re-bar_SD390	D29-32, deformed bar	1.055	ton	40,449.97	0.00	76,134	42,674.72	(0.00)	80,321	Mat-285
Subtotal		1.00	ton				80,840.57		80,321	
Per Unit Price		1.00	ton				80,840.57	0.00	80,321	

00- 214 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D13 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 215 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D16-D25 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.3x2.5	0.75	person	21,870.00			16,402.50			Lab-1
Rebar work	1.5x2.5	3.75	person	18,270.00			68,512.50			Lab-15
Unskilled Labour	1.3x2.5	3.25	person	12,150.00			39,487.50			Lab-21
Miscellaneous cost		0.03	-	124,402.50			3,732.08			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				128,134.58			
Per Unit Price		1.00	ton				128,134.58	0.00	0	

00- 216 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D29-D32 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	0.9x2.5	2.25	person	18,270.00			41,107.50			Lab-15
Unskilled Labour	0.8x2.5	2.00	person	12,150.00			24,300.00			Lab-21
Miscellaneous cost		0.03	-	76,342.50			2,290.28			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				78,632.78			
Per Unit Price		1.00	ton				78,632.78	0.00	0	

00- 217 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D35 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD390	D35, deformed bar	1.055	ton	40,449.97	0.00	78,834	42,674.72	(0.00)	83,170	Mat-286
Subtotal		1.00	ton				126,763.52		83,170	
Per Unit Price		1.00	ton				126,763.52	0.00	83,170	

00- 218 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D38 0.00 Quantity･Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD390	D38, deformed bar	1.055	ton	40,449.97	0.00	79,734	42,674.72	(0.00)	84,119	Mat-287
Subtotal		1.00	ton				126,763.52		84,119	
Per Unit Price		1.00	ton				126,763.52	0.00	84,119	

00- 219 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D42 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD390	D42, deformed bar	1.055	ton	40,449.97	0.00	80,634	42,674.72	(0.00)	85,069	Mat-288
Subtotal		1.00	ton				126,763.52		85,069	
Per Unit Price		1.00	ton				126,763.52	0.00	85,069	

00- 220 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Arranging D51 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD390	D51, deformed bar	1.055	ton	40,449.97	0.00	81,539	42,674.72	(0.00)	86,023	Mat-289
Subtotal		1.00	ton				126,763.52		86,023	
Per Unit Price		1.00	ton				126,763.52	0.00	86,023	

00- 221 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D35 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00-　222　Productivity correction coefficient: Asia　Labour coefficient　General　Machine coefficient　none

Item: Rebar work_SD390　Reference　H4MOC　256

Specification: Assembling D38　0.00　Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 223 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D42 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 224 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD390 Reference H4MOC 256

Specification: Assembling D51 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 225 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D35 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD345	D35, deformed bar	1.055	ton	40,449.97	0.00	76,134	42,674.72	(0.00)	80,321	Mat-4
Subtotal		1.00	ton				126,763.52		80,321	
Per Unit Price		1.00	ton				126,763.52	0.00	80,321	

00- 226 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D38 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD345	D38, deformed bar	1.055	ton	40,449.97	0.00	77,034	42,674.72	(0.00)	81,271	Mat-5
Subtotal		1.00	ton				126,763.52		81,271	
Per Unit Price		1.00	ton				126,763.52	0.00	81,271	

00- 227 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D42 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD345	D42, deformed bar	1.055	ton	40,449.97	0.00	77,934	42,674.72	(0.00)	82,220	Mat-6
Subtotal		1.00	ton				126,763.52		82,220	
Per Unit Price		1.00	ton				126,763.52	0.00	82,220	

00- 228 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Arranging D51 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.2x2.5	0.50	person	21,870.00			10,935.00			Lab-1
Rebar work	1.1x2.5	2.75	person	18,270.00			50,242.50			Lab-15
Unskilled Labour	0.7x2.5	1.75	person	12,150.00			21,262.50			Lab-21
Miscellaneous cost		0.02	-	82,440.00			1,648.80			
Material	Loss amount is counted									
Re-bar_SD345	D51, deformed bar	1.055	ton	40,449.97	0.00	78,748	42,674.72	(0.00)	83,080	Mat-7
Subtotal		1.00	ton				126,763.52		83,080	
Per Unit Price		1.00	ton				126,763.52	0.00	83,080	

00- 229 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D35 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 230 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D38 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 231 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D42 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 232 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Rebar work_SD345 Reference H4MOC 256

Specification: Assembling D51 0.00 Quantity・Unit: 1 ton

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.4x2.5	1.00	person	21,870.00			21,870.00			Lab-1
Rebar work	1.8x2.5	4.50	person	18,270.00			82,215.00			Lab-15
Unskilled Labour	1.5x2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost		0.03	-	149,647.50			4,489.43			
Material										
Material cost is counted in work item "Arranging"										
Subtotal		1.00	ton				154,136.93			
Per Unit Price		1.00	ton				154,136.93	0.00	0	

00- 233 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Concrete work for Pier(2)_On river Reference H28MLIT 735

Specification: Class D 0.00 Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.06x1.5	0.09	person	21,870			1,968			Lab-1
Skilled Labour	0.18x1.5	0.27	person	14,580			3,937			Lab-20
Unskilled Labour	0.24x1.5	0.36	person	12,150			4,374			Lab-21
Miscellaneous cost	4%	0.04	-	10,279	0	0	411	0	0	
Machine										
Concrete pump car	0.06x/1 (day)	0.06	day	855,000	0	0	51,300	0	0	ERN_3
90-110m3/hr										
Crawler crane	100t hang	0.06	day	604,856			36,291			OPE-42
Barge	1500t	0.06	day	2,498,798	0	0	149,928	0	0	Mac-d(10)
Miscellaneous cost	4%	0.04	-	51,300	0	0	2,052	0	0	
*for concrete pump only										
Material	Loss amount is counted									
Concrete	Class D	10.60	m3	80,123	0	0	849,303	0	0	02-224
Concrete bucket	5.0 m3 *2 nos	0.06	day	109,946	0		6,597	0		OPE-32
Concrete mixer truck	5.0 m3 * 3 nos	0.06	day	171,633			10,298			OPE-71
Subtotal		10.00	m3				1,116,459			
Per Unit Price		1.00	m3				111,646	0	0	

00- 234 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=1.5/1.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	9.54	m3	99,456.29	0.00	0	948,813.01	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.95	m3	95,194.45	0.00	0	185,629.18	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	92.96	m2	8,784.71	0.00	0	816,626.64	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	3.90	m3	917.60	0.00	0	3,578.64	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.743	ton	126,764	0.0	78,422	94,185	0.00	58,268	00-79
Rebar work_SD345	Assembling D13	0.743	ton	154,137	0.0	0	114,524	0.00	0	00-82
Excavation	Excavation for foundation	76.54	m3	1,610.51	0.00	0	123,265.21	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	41.00	m3	20,940.23	0.00	0	858,549.43	0.00	0	00-76
Subtotal		10.00	m				3,145,171.15		58,268	
Per Unit Price		1.00	m				314,517.12	0.00	5,827	

00- 235 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=1.0/1.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	8.14	m3	99,456.29	0.00	0	809,574.20	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.45	m3	95,194.45	0.00	0	138,031.95	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	85.36	m2	8,784.71	0.00	0	749,862.85	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	2.90	m3	917.60	0.00	0	2,661.04	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.622	ton	126,764	0.0	78,422	78,847	0.00	48,778	00-79
Rebar work_SD345	Assembling D13	0.622	ton	154,137	0.0	0	95,873	0.00	0	00-82
Excavation	Excavation for foundation	66.79	m3	1,610.51	0.00	0	107,562.74	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	41.00	m3	20,940.23	0.00	0	858,549.43	0.00	0	00-76
Subtotal		10.00	m				2,840,962.29		48,778	
Per Unit Price		1.00	m				284,096.23	0.00	4,878	

00- 236 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=1.0/1.0m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	6.64	m3	99,456.29	0.00	0	660,389.77	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.45	m3	95,194.45	0.00	0	138,031.95	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	65.36	m2	8,784.71	0.00	0	574,168.65	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	2.90	m3	917.60	0.00	0	2,661.04	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.532	ton	126,764	0.0	78,422	67,438	0.00	41,721	00-79
Rebar work_SD345	Assembling D13	0.532	ton	154,137	0.0	0	82,001	0.00	0	00-82
Excavation	Excavation for foundation	46.04	m3	1,610.51	0.00	0	74,144.66	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	26.80	m3	20,940.23	0.00	0	561,198.16	0.00	0	00-76
Subtotal		10.00	m				2,160,033.27		41,721	
Per Unit Price		1.00	m				216,003.33	0.00	4,172	

00- 237 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=0.8/1.0m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	4.50	m3	99,456.29	0.00	0	447,553.31	(0.00)	0	00-51
Concrete work(1)	18N/mm2	5.90	m3	95,194.45	0.00	0	561,647.26	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	21.50	m2	8,784.71	0.00	0	188,871.27	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.90	m3	917.60	0.00	0	1,743.44	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.283	ton	126,764	0.0	78,422	35,874	0.00	22,193	00-79
Rebar work_SD345	Assembling D13	0.283	ton	154,137	0.0	0	43,621	0.00	0	00-82
Excavation	Excavation for foundation	40.60	m3	1,610.51	0.00	0	65,386.71	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	24.96	m3	20,940.23	0.00	0	522,668.14	0.00	0	00-76
Subtotal		10.00	m				1,867,364.96		22,193	
Per Unit Price		1.00	m				186,736.50	0.00	2,219	

00- 238 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=0.8/0.8m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	5.00	m3	99,456.29	0.00	0	497,082.54	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.25	m3	95,194.45	0.00	0	118,993.06	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	51.16	m2	8,784.71	0.00	0	449,460.90	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.88	m3	917.60	0.00	0	1,720.50	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.399	ton	126,764	0.0	78,422	50,579	0.00	31,290	00-79
Rebar work_SD345	Assembling D13	0.399	ton	154,137	0.0	0	61,501	0.00	0	00-82
Excavation	Excavation for foundation	34.20	m3	1,610.51	0.00	0	55,079.44	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	20.62	m3	20,940.23	0.00	0	431,787.54	0.00	0	00-76
Subtotal		10.00	m				1,666,203.26		31,290	
Per Unit Price		1.00	m				166,620.33	0.00	3,129	

00- 239 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=0.5/0.85m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	4.34	m3	99,456.29	0.00	0	431,441.39	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.95	m3	95,194.45	0.00	0	90,434.73	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	48.72	m2	8,784.71	0.00	0	428,026.21	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.43	m3	917.60	0.00	0	1,307.58	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.341	ton	126,764	0.0	78,422	43,226	0.00	26,742	00-79
Rebar work_SD345	Assembling D13	0.341	ton	154,137	0.0	0	52,561	0.00	0	00-82
Excavation	Excavation for foundation	32.19	m3	1,610.51	0.00	0	51,839.10	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	21.82	m3	20,940.23	0.00	0	456,915.82	0.00	0	00-76
Subtotal		10.00	m				1,555,751.88		26,742	
Per Unit Price		1.00	m				155,575.19	0.00	2,674	

00- 240 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_with_cover Reference JICA study team

Specification: B/H=0.5/0.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	3.29	m3	99,456.29	0.00	0	327,012.28	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.95	m3	95,194.45	0.00	0	90,434.73	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	34.72	m2	8,784.71	0.00	0	305,040.27	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.43	m3	917.60	0.00	0	1,307.58	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.266	ton	126,764	0.0	78,422	33,719	0.00	20,860	00-79
Rebar work_SD345	Assembling D13	0.266	ton	154,137	0.0	0	41,000	0.00	0	00-82
Excavation	Excavation for foundation	21.60	m3	1,610.51	0.00	0	34,787.02	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	14.04	m3	20,940.23	0.00	0	294,000.83	0.00	0	00-76
Subtotal		10.00	m				1,127,302.23		20,860	
Per Unit Price		1.00	m				112,730.22	0.00	2,086	

00- 241 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_without_cover Reference JICA study team

Specification: B/H=1.5/1.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	7.20	m3	99,456.29	0.00	0	716,085.29	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.95	m3	95,194.45	0.00	0	185,629.18	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	63.00	m2	8,784.71	0.00	0	553,436.73	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	3.90	m3	917.60	0.00	0	3,578.64	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.506	ton	126,764	0.0	78,422	64,142	0.00	39,682	00-79
Rebar work_SD345	Assembling D13	0.506	ton	154,137	0.0	0	77,993	0.00	0	00-82
Excavation	Excavation for foundation	76.54	m3	1,610.51	0.00	0	123,265.21	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	41.00	m3	20,940.23	0.00	0	858,549.43	0.00	0	00-76
Subtotal		10.00	m				2,582,680.11		39,682	
Per Unit Price		1.00	m				258,268.01	0.00	3,968	

00- 242 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_without_cover Reference JICA study team

Specification: B/H=1.0/1.0m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	4.95	m3	99,456.29	0.00	0	492,308.64	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.45	m3	95,194.45	0.00	0	138,031.95	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	43.00	m2	8,784.71	0.00	0	377,742.53	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	2.90	m3	917.60	0.00	0	2,661.04	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.361	ton	126,764	0.0	78,422	45,762	0.00	28,310	00-79
Rebar work_SD345	Assembling D13	0.361	ton	154,137	0.0	0	55,643	0.00	0	00-82
Excavation	Excavation for foundation	46.04	m3	1,610.51	0.00	0	74,144.66	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	26.74	m3	20,940.23	0.00	0	559,941.75	0.00	0	00-76
Subtotal		10.00	m				1,746,235.63		28,310	
Per Unit Price		1.00	m				174,623.56	0.00	2,831	

00- 243 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_without_cover Reference JICA study team

Specification: B/H=0.8/0.8m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	4.05	m3	99,456.29	0.00	0	402,797.97	(0.00)	0	00-51
Concrete work(1)	18N/mm2	1.25	m3	95,194.45	0.00	0	118,993.06	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	35.00	m2	8,784.71	0.00	0	307,464.85	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.88	m3	917.60	0.00	0	1,720.50	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.272	ton	126,764	0.0	78,422	34,480	0.00	21,331	00-79
Rebar work_SD345	Assembling D13	0.272	ton	154,137	0.0	0	41,925	0.00	0	00-82
Excavation	Excavation for foundation	34.20	m3	1,610.51	0.00	0	55,079.44	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	20.62	m3	20,940.23	0.00	0	431,787.54	0.00	0	00-76
Subtotal		10.00	m				1,394,248.28		21,331	
Per Unit Price		1.00	m				139,424.83	0.00	2,133	

00- 244 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_without_cover Reference JICA study team

Specification: B/H=0.5/0.5m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	2.70	m3	99,456.29	0.00	0	268,531.98	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.95	m3	95,194.45	0.00	0	90,434.73	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	23.00	m2	8,784.71	0.00	0	202,048.33	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.43	m3	917.60	0.00	0	1,307.58	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.197	ton	126,764	0.0	78,422	24,972	0.00	15,449	00-79
Rebar work_SD345	Assembling D13	0.197	ton	154,137	0.0	0	30,365	0.00	0	00-82
Excavation	Excavation for foundation	21.60	m3	1,610.51	0.00	0	34,787.02	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	14.04	m3	20,940.23	0.00	0	294,000.83	0.00	0	00-76
Subtotal		10.00	m				946,447.86		15,449	
Per Unit Price		1.00	m				94,644.79	0.00	1,545	

00- 245 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=1.2/1.2m,H=1.6m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	2.55	m3	99,456.29	0.00	0	253,911.91	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.29	m3	95,194.45	0.00	0	27,511.20	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	21.75	m2	8,784.71	0.00	0	191,102.58	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.58	m3	917.60	0.00	0	530.37	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.118	ton	126,764	0.0	78,422	14,958	0.00	9,254	00-79
Rebar work_SD345	Assembling D13	0.118	ton	154,137	0.0	0	18,188	0.00	0	00-82
Excavation	Excavation for foundation	22.57	m3	1,610.51	0.00	0	36,352.43	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	12.99	m3	20,940.23	0.00	0	271,950.77	0.00	0	00-76
Subtotal		1.00	nos				814,505.52		9,254	
Per Unit Price		1.00	nos				814,505.52	0.00	9,254	

00- 246 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=1.0/1.0m,H=1.35m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	1.88	m3	99,456.29	0.00	0	186,878.37	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.23	m3	95,194.45	0.00	0	21,418.75	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	16.25	m2	8,784.71	0.00	0	142,786.68	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.45	m3	917.60	0.00	0	412.92	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.088	ton	126,764	0.0	78,422	11,155	0.00	6,901	00-79
Rebar work_SD345	Assembling D13	0.088	ton	154,137	0.0	0	13,564	0.00	0	00-82
Excavation	Excavation for foundation	16.94	m3	1,610.51	0.00	0	27,283.65	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	10.05	m3	20,940.23	0.00	0	210,344.61	0.00	0	00-76
Subtotal		1.00	nos				613,844.22		6,901	
Per Unit Price		1.00	nos				613,844.22	0.00	6,901	

00- 247 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.7/0.7m,H=2.25m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	1.72	m3	99,456.29	0.00	0	171,064.82	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.62	m3	95,194.45	0.00	0	59,020.56	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	16.89	m2	8,784.71	0.00	0	148,373.75	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.44	m3	917.60	0.00	0	1,321.34	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.116	ton	126,764	0.0	78,422	14,705	0.00	9,097	00-79
Rebar work_SD345	Assembling D13	0.116	ton	154,137	0.0	0	17,880	0.00	0	00-82
Excavation	Excavation for foundation	38.58	m3	1,610.51	0.00	0	62,133.48	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	35.00	m3	20,940.23	0.00	0	732,908.05	0.00	0	00-76
Subtotal		1.00	nos				1,207,406.45		9,097	
Per Unit Price		1.00	nos				1,207,406.45	0.00	9,097	

00- 248 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.7/0.7m,H=1.85m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	1.47	m3	99,456.29	0.00	0	146,001.83	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.48	m3	95,194.45	0.00	0	45,693.34	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	14.36	m2	8,784.71	0.00	0	126,104.51	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.44	m3	917.60	0.00	0	1,321.34	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.099	ton	126,764	0.0	78,422	12,550	0.00	7,764	00-79
Rebar work_SD345	Assembling D13	0.099	ton	154,137	0.0	0	15,260	0.00	0	00-82
Excavation	Excavation for foundation	29.36	m3	1,610.51	0.00	0	47,281.35	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	26.26	m3	20,940.23	0.00	0	549,974.20	0.00	0	00-76
Subtotal		1.00	nos				944,185.72		7,764	
Per Unit Price		1.00	nos				944,185.72	0.00	7,764	

00- 249 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.7/0.7m,H=1.05m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.83	m3	99,456.29	0.00	0	82,747.63	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.12	m3	95,194.45	0.00	0	11,518.53	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	9.50	m2	8,784.71	0.00	0	83,489.88	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.24	m3	917.60	0.00	0	222.06	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.048	ton	126,764	0.0	78,422	6,085	0.00	3,764	00-79
Rebar work_SD345	Assembling D13	0.048	ton	154,137	0.0	0	7,399	0.00	0	00-82
Excavation	Excavation for foundation	10.14	m3	1,610.51	0.00	0	16,322.52	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	6.61	m3	20,940.23	0.00	0	138,435.86	0.00	0	00-76
Subtotal		1.00	nos				346,219.70		3,764	
Per Unit Price		1.00	nos				346,219.70	0.00	3,764	

00- 250 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.6/0.4m,H=0.5m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.21	m3	99,456.29	0.00	0	20,388.54	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.03	m3	95,194.45	0.00	0	3,141.42	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	2.78	m2	8,784.71	0.00	0	24,456.63	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.24	m3	917.60	0.00	0	222.06	(0.00)	0	01-17
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Assembling D13		ton	154,137	0.0	0	0	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
Grating	T-14・6 501 x 600mm	1.00	nos	128,725.96			(128,725.96)			Mat-136
Subtotal		1.00	nos				176,934.61			
Per Unit Price		1.00	nos				176,934.61	0.00	0	

00- 251 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.435/0.6m,H=0.75m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.38	m3	99,456.29	0.00	0	37,495.02	(0.00)	0	00-51
Concrete work(1)	18N/mm2		m3	95,194.45	0.00	0	0.00	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	4.55	m2	8,784.71	0.00	0	39,996.78	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.14	m3	917.60	0.00	0	126.63	(0.00)	0	01-17
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Assembling D13		ton	154,137	0.0	0	0	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
Grating	T-14・6 501 x 600mm	1.00	nos	128,725.96			(128,725.96)			Mat-136
Subtotal		1.00	nos				206,344.39			
Per Unit Price		1.00	nos				206,344.39	0.00	0	

00- 252 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.5/0.5m,H=0.7m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.45	m3	99,456.29	0.00	0	44,655.87	(0.00)	0	00-51
Concrete work(1)	18N/mm2		m3	95,194.45	0.00	0	0.00	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	4.90	m2	8,784.71	0.00	0	43,018.72	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.15	m3	917.60	0.00	0	137.64	(0.00)	0	01-17
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Assembling D13		ton	154,137	0.0	0	0	0.00	0	00-82
Excavation	Excavation for foundation	1.05	m3	1,610.51	0.00	0	1,691.04	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	0.22	m3	20,940.23	0.00	0	4,523.09	0.00	0	00-76
Grating	T-14・6 501 x 600mm		nos	128,725.96			(0.00)			Mat-136
Subtotal		1.00	nos				94,026.36			
Per Unit Price		1.00	nos				94,026.36	0.00	0	

00- 253 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.6/0.4m,H=0.5m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.20	m3	99,456.29	0.00	0	19,393.98	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.03	m3	95,194.45	0.00	0	3,141.42	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	2.63	m2	8,784.71	0.00	0	23,112.57	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow material		m3	917.60	0.00	0	0.00	(0.00)	0	01-17
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Assembling D13		ton	154,137	0.0	0	0	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
Grating	T-14・6 501 x 600mm	1.00	nos	128,725.96			(128,725.96)			Mat-136
Subtotal		1.00	nos				174,373.93			
Per Unit Price		1.00	nos				174,373.93	0.00	0	

00- 254 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Pipe culvert Reference JICA study team

Specification: φ0.3m,360° concreted_A Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Precast concrete pipe	dia. 300mm	10.00	m	19,935.00	0.00	0.00	199,350.00	0.00	0	Mat-20
Concrete work	24N/mm2	2.12	m3	99,456.29	0.00	0	210,648.42	(0.00)	0	00-51
Concrete work(1)	18N/mm2		m3	95,194.45	0.00	0	0.00	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	11.20	m2	8,784.71	0.00	0	98,388.75	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.99	m3	917.60	0.00	0	908.42	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.146	ton	126,764	0.0	78,422	18,507	0.00	11,450	00-79
Rebar work_SD345	Assembling D13	0.146	ton	154,137	0.0	0	22,504	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
Subtotal		10.00	m				550,307.05		11,450	
Per Unit Price		1.00	m				55,030.71	0.00	1,145	

00- 255 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Pipe culvert Reference JICA study team

Specification: φ0.3m,360° concreted_B Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Precast concrete pipe	dia. 300mm	10.00	m	19,935.00	0.00	0.00	199,350.00	0.00	0	Mat-20
Concrete work	24N/mm2	2.12	m3	99,456.29	0.00	0	210,648.42	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.26	m3	95,194.45	0.00	0	25,131.33	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	12.00	m2	8,784.71	0.00	0	105,416.52	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow material		m3	917.60	0.00	0	0.00	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.146	ton	126,764	0.0	78,422	18,507	0.00	11,450	00-79
Rebar work_SD345	Assembling D13	0.146	ton	154,137	0.0	0	22,504	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
Subtotal		10.00	m				581,557.73		11,450	
Per Unit Price		1.00	m				58,155.77	0.00	1,145	

00- 256 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Outlet_TypeA_Left Reference JICA study team

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Box Culvert fabrication	1000*1000	5.24	m	247,447	0	9,564	1,295,386	0	50,068	01-261
Concrete work(1)	18N/mm2	2.79	m3	95,194	0	0	265,973	0	0	00-52
Concrete work	24N/mm2	15.85	m3	99,456	0	0	1,575,885	0	0	00-51
Form work	for ordinal concrete_with&without rebar	63.94	m2	8,785	0	0	561,712	0	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	5.59	m3	918	0	0	5,128	0	0	01-17
Rebar work_SD345	Arranging D13	1.190	ton	126,764	0	78,422	150,849	0	93,322	00-79
Rebar work_SD345	Assembling D13	1.190	ton	154,137	0	0	183,423	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.295	ton	114,347.57	0.00	81,271.00	33,732.53	0.00	23,975	00-80
Rebar work_SD345	Assembling D16-D25	0.295	nos	128,134.58	0.00	0.00	37,799.70	0.00	0	00-83
Excavation	Excavation for foundation	226.00	m3	1,611	0	0	363,975	0	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	79.02	m3	20,940	0	0	1,654,697	0	0	00-76
Rip rap setting	for Outlet	3.9	m3	48,803	0	0	190,332	0	0	01-289
Subtotal		1.00	LS				6,318,892		167,365	
Per Unit Price		1.00	LS				6,318,892	0	167,365	

00- 257 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Outlet_TypeB_Left Reference JICA study team

Specification: PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Box Culvert fabrication	2000*1500	5.05	m	386,040	0	17,625	1,949,503	0	89,006	01-262
Concrete work(1)	18N/mm2	4.26	m3	95,194	0	0	405,338	0	0	00-52
Concrete work	24N/mm2	26.92	m3	99,456	0	0	2,677,264	0	0	00-51
Form work	for ordinal concrete_with&without rebar	90.67	m2	8,785	0	0	796,536	0	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	8.52	m3	918	0	0	7,813	0	0	01-17
Rebar work_SD345	Arranging D13	1.517	ton	126,764	0	78,422	192,300	0	118,966	00-79
Rebar work_SD345	Assembling D13	1.517	ton	154,137	0	0	233,826	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.483	ton	114,347.57	0.00	81,271.00	55,229.88	0.00	39,254	00-80
Rebar work_SD345	Assembling D16-D25	0.483	nos	128,134.58	0.00	0.00	61,889.00	0.00	0	00-83
Excavation	Excavation for foundation	569.82	m3	1,611	0	0	917,704	0	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	252.49	m3	20,940	0	0	5,287,261	0	0	00-76
Rip rap setting	for Outlet	6.18	m3	48,803	0	0	301,604	0	0	01-289
Subtotal		1.00	LS				12,886,268		247,226	
Per Unit Price		1.00	LS				12,886,268	0	247,226	

00- 258 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Outlet_TypeB_Right Reference JICA study team

Specification: PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Box Culvert fabrication	2000*1500	5.05	m	386,040	0	17,625	1,949,503	0	89,006	01-262
Concrete work(1)	18N/mm2	4.26	m3	95,194	0	0	405,338	0	0	00-52
Concrete work	24N/mm2	26.92	m3	99,456	0	0	2,677,264	0	0	00-51
Form work	for ordinal concrete_with&without rebar	90.67	m2	8,785	0	0	796,536	0	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	8.52	m3	918	0	0	7,813	0	0	01-17
Rebar work_SD345	Arranging D13	1.517	ton	126,764	0	78,422	192,300	0	118,966	00-79
Rebar work_SD345	Assembling D13	1.517	ton	154,137	0	0	233,826	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.483	ton	114,347.57	0.00	81,271.00	55,229.88	0.00	39,254	00-80
Rebar work_SD345	Assembling D16-D25	0.483	nos	128,134.58	0.00	0.00	61,889.00	0.00	0	00-83
Excavation	Excavation for foundation	512.26	m3	1,611	0	0	825,000	0	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	229.67	m3	20,940	0	0	4,809,322	0	0	00-76
Rip rap setting	for Outlet	6.18	m3	48,803	0	0	301,604	0	0	01-289
Subtotal		1.00	LS				12,315,624		247,226	
Per Unit Price		1.00	LS				12,315,624	0	247,226	

00- 259 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Vertical Drain Reference JICA study team

Specification: TypeA_PKG1 Quantity・Unit: 1.00 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PVC Pipe	200mm	10.54	m	31,641	0	0	333,429	0	0	Mat-29
PVC Pipe	200mm / Elbow 90°	3.00	nos	69,231	0	0	207,692	0	0	Mat-31
Pipe brace		6.00	nos	8,730	0	0	52,377	0	0	Mat-455
Anchor	M12	12.00	nos	714	0	0	8,567	0	0	Mat-456
BN	M12_40	12.00	nos	473	0	0	5,673	0	0	Mat-457
Subtotal		1.00	LS				607,739			
Per Unit Price		1.00	LS				607,739	0	0	

00- 260 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Vertical Drain Reference JICA study team

Specification: TypeA_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PVC Pipe	200mm	66.15	m	31,641	0	0	2,093,059	0	0	Mat-29
PVC Pipe	200mm / Elbow 90°	17.00	nos	69,231	0	0	1,176,923	0	0	Mat-31
Pipe brace		34.00	nos	8,730	0	0	296,805	0	0	Mat-455
Anchor	M12	68.00	nos	714	0	0	48,548	0	0	Mat-456
BN	M12_40	68.00	nos	473	0	0	32,145	0	0	Mat-457
Subtotal		1.00	LS				3,647,481			
Per Unit Price		1.00	LS				3,647,481	0	0	

00-　261　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　none

Item: Vertical Drain　Reference　JICA study team

Specification: TypeB_PKG2　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	4.81	m3	99,456.29	0.00	0	478,185.84	(0.00)	0	00-51
Concrete work(1)	18N/mm2		m3	95,194.45	0.00	0	0.00	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	37.59	m2	8,784.71	0.00	0	330,190.89	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.82	m3	917.60	0.00	0	1,670.95	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.008	ton	126,764	0.0	78,422	1,006	0.00	623	00-79
Rebar work_SD345	Assembling D13	0.008	ton	154,137	0.0	0	1,224	0.00	0	00-82
Excavation	Excavation for foundation	33.45	m3	1,610.51	0.00	0	53,871.56	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	25.73	m3	20,940.23	0.00	0	538,813.06	0.00	0	00-76
Subtotal		1.00	LS				1,404,962		623	
Per Unit Price		1.00	LS				1,404,962	0	623	

00-	262	Productivity correction coefficient: Asia	Labour coefficient	none	Machine coefficient	Simple

Item: Road base　　Reference: H24MLIT P495

Specification: Base course t=250mm　　Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Base course material		31.75	m3	18,434.29			585,288.71			Mat-52
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	179,878.41		0	16,189.06		0	
100m2 requires Base course material amount =100m2×0.25m×(1+0.27)=31.75(m3)										
Maximun t of 1 layer =150mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*2=0.21(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				781,356.18			
Per Unit Price		1.00	m2				7,813.56	0.00	0	

00- 263 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Subbase courset=250mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Subbase course material		31.75	m3	11,124.14			353,191.45			Mat-51
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	179,878.41		0	16,189.06		0	
100m2 requires Subbase course material amount =100m2×0.25m×(1+0.27)=31.75(m3)										
Maximun t of 1 layer =200mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*2=0.21(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				549,258.92			
Per Unit Price		1.00	m2				5,492.59	0.00	0	

00-	264	Productivity correction coefficient: Asia	Labour coefficient	none	Machine coefficient	Simple

Item: Road base　　Reference: H24MLIT P495

Specification: Subbase courset=300mm　　Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Subbase course material		38.10	m3	11,124.14			423,829.73			Mat-51
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	179,878.41		0	16,189.06		0	
100m2 requires Subbase course material amount =100m2×0.3m×(1+0.27)=38.1(m3)										
Maximun t of 1 layer =200mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*2=0.21(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				619,897.20			
Per Unit Price		1.00	m2				6,198.97	0.00	0	

00- 265 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Subbase courset=350mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Subbase course material		44.45	m3	11,124.14			494,468.02			Mat-51
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	179,878.41		0	16,189.06		0	
100m2 requires Subbase course material amount =100m2×0.35m×(1+0.27)=44.45(m3)										
Maximun t of 1 layer =200mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*2=0.21(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				690,535.49			
Per Unit Price		1.00	m2				6,905.35	0.00	0	

00- 266 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Subbase courset=500mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×3(Layer)	0.72	person	12,150.00			8,748.00			Lab-21
Subbase course material		63.50	m3	11,124.14			706,382.89			Mat-51
Motor grader	3.1m	0.32	day	324,440.00			103,160.57			OPE-16
Road roller	10-12t	0.32	day	226,584.00			72,045.79			OPE-18
Tire roller	8-20t	0.32	day	270,040.00			85,863.28			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	269,817.64		0	24,283.59		0	
100m2 requires Subbase course material amount =100m2×0.5m×(1+0.27)=63.5(m3)										
Maximun t of 1 layer =200mm, 3Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*3=0.32(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				1,000,484.12			
Per Unit Price		1.00	m2				10,004.84	0.00	0	

00- 267 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Hard core with sand Reference H24MLIT P495

Specification: Subbase courset=500mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×3(Layer)	0.72	person	12,150.00			8,748.00			Lab-21
Sandy soil		63.50	m3	12,713.30	0.00	0	807,294.55	0.00	0	Mat-49
Motor grader	3.1m	0.32	day	324,440.00			103,160.57			OPE-16
Road roller	10-12t	0.32	day	226,584.00			72,045.79			OPE-18
Tire roller	8-20t	0.32	day	270,040.00			85,863.28			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	269,817.64		0	24,283.59		0	
100m2 requires Subbase course material amount =100m2×0.5m×(1+0.27)=63.5(m3)										
Maximun t of 1 layer =200mm, 3Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*3=0.32(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				1,101,395.78			
Per Unit Price		1.00	m2				11,013.96	0.00	0	

00- 268 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Sand compacted Reference H24MLIT P495

Specification: Subbase courset=200mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×2(Layer)	0.48	person	12,150.00			5,832.00			Lab-21
Sandy soil		63.50	m3	12,713.30	0.00	0	807,294.55	0.00	0	Mat-49
Motor grader	3.1m	0.21	day	324,440.00			68,773.71			OPE-16
Road roller	10-12t	0.21	day	226,584.00			48,030.52			OPE-18
Tire roller	8-20t	0.21	day	270,040.00			57,242.18			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	179,878.41		0	16,189.06		0	
100m2 requires Subbase course material amount =100m2×0.25m×(1+0.27)=31.75(m3)										
Maximun t of 1 layer =200mm, 2Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×2(Layer)=100/1,110/85%*2=0.21(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				1,003,362.02			
Per Unit Price		1.00	m2				10,033.62	0.00	0	

00- 269 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Concret work_other material installation Reference Quantity計算書 CDS-63

Specification: Reinforced Retaining Wall (Type 1)_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	93.50	m3	99,456	0	0	9,299,163	0	0	00-51
Form work	for ordinal concrete_with&without rebar	286.70	m2	8,785	0	0	2,518,576	0	0	01-22
Rebar work_SD345	Arranging D13	3.78	ton	114,348	0	81,271	432,348	0	307,286	00-80
Rebar work_SD345	Assembling D13	3.78	ton	154,137	0	0	582,792	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.454	ton	114,348	0	81,271	51,960	0	36,930	00-80
Rebar work_SD345	Assembling D16-D25	0.454	nos	128,135	0	0	58,224	0	0	00-83
Joint filler	t=10mm	11.50	m2	0	0	351	0	0	4,037	Mat-441
Joint filler	t=20mm	518.40	m2	0	0	702	0	0	363,917	Mat-442
Rubber Plate	t=10mm (10x300x600)	21.96	m2	0	0	11,610	0	0	254,956	Mat-443
Styrene Foam	b=50mm (50x500x1000)		m3	0	0	19,530	0	0	0	Mat-444
Geotextile		242.50	m2	0	0	324	0	0	78,570	Mat-445
Subtotal		1.00	LS				12,943,063		1,045,696	
Per Unit Price		1.00	LS				12,943,063	0	1,045,696	

00- 270 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Base concrete of Reinforced Retaining Wall (Type 1) Reference

Specification: Base concrete_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work(1)	18N/mm2	17.56	m3	95,194	0	0	1,671,615	0.00	0	00-52
Form work	for ordinal concrete_with&without rebar	29.48	m2	8,784.71	0.00	0.00	258,973	0.00	0	01-22
Subtotal		1.00	LS				1,930,587.79			
Per Unit Price		1.00	LS				1,930,587.79	0.00	0	

00- 271

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier Fabrication

Reference H28国基 PIV-7-1-1

Specification : on Mechanically Stabilized Earth Wall_Ramp

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		42.07	nos			26,900			1,131,614	
G	4.382ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	3.268	ton	0	0	81,000	0	0	264,690	Mat-253
SS400	L300	0.570	ton	0	0	72,900	0	0	41,576	Mat-151
M16*40		0.018	ton	0	0	1,342,640	0	0	23,591	
Hot-Dip Galvanization	HDZ55	4.38	t			55,800			244,517	Mat-415
Rebar work_SD345	Arranging D16-D25	0.452	ton	114,348	0	81,271	51,652	0	36,711	00-80
Rebar work_SD345	Assembling D16-D25	0.452	ton	128,135	0	0	57,880	0	0	00-83
Subtotal		1.00	LS				109,532		1,742,699	
Per Unit Price		1.00	LS				109,532	0	1,742,699	

00- 272 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: U-Ditch_without_cover Reference JICA study team

Specification: B/H=0.3/0.3m Quantity・Unit: 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	1.80	m3	99,456.29	0.00	0	179,021.32	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.38	m3	95,194.45	0.00	0	35,697.92	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	15.00	m2	8,784.71	0.00	0	131,770.65	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.43	m3	917.60	0.00	0	1,307.58	(0.00)	0	01-17
Rebar work_SD345	Arranging D13		ton	126,764	0.0	78,422	0	0.00	0	00-79
Rebar work_SD345	Assembling D13	0.000	ton	154,137	0.0	0	0	0.00	0	00-82
Excavation	Excavation for foundation	10.00	m3	1,610.51	0.00	0	16,105.10	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	6.94	m3	20,940.23	0.00	0	145,325.20	0.00	0	00-76
Subtotal		10.00	m				509,227.77			
Per Unit Price		1.00	m				50,922.78	0.00	0	

00- 273 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_A2 Reference H28MLIT 141

Specification: RCD pile ϕ 1500_L=31.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 30-40m	= 1.61 days/nos / 0.75 = 2.147 day/nos	2.147								
Foreman	1* Days/nos * 1 person	2.15	person	21,870.00			46,954.89			Lab-1
Skilled Labour	1* Days/nos * 1 person	2.15	person	14,580.00			31,303.26			Lab-20
Scaffolder	1* Days/nos * 2 person	4.29	person	18,270.00			78,451.38			Lab-6
Unskilled Labour	1* Days/nos * 2 person	4.29	person	12,150.00			52,172.10			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	3.24	day	53,298	227		172,791	737		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	2.59	day	670,516			1,739,035			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	2.13	day	297,147	0		631,595	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	1.46	day	297,147	0		433,823	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	1.87	day	195,797			366,569			OPE-12
Generator	125/150kVA	3.24	day	553,278			1,793,711			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 1.5m^2 * 31.5 m * (1+0.12)	62.34	m3	92,558	0	0	5,770,539	0	0	02-223
Rebar work_SD345	Arranging D13	0.014	ton	126,764	0.0	78,422	1,775	0.00	1,098	00-79
Rebar work_SD345	Arranging D16-D25	2.871	ton	114,348	0.0	81,271	328,292	0.00	233,329	00-80
Rebar work_SD345	Arranging D29-D32	0.000	ton	80,841	0.0	83,080	0	0.00	0	00-81
Rebar work_SD345	Assembling D13	0.014	ton	154,137	0.0	0	2,158	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	2.871	nos	128,135	0.0	0	367,874	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	0.000	ton	78,633	0.0	0	0	0.00	0	00-84
Transportation and Disporsal fee	for disposal site including disposal fee	77.93	m3	7,754	0.0	0	604,253	0	0	00-74
Miscellaneous cost	31%	0.31		3,552,695	737	0	1,101,335	228	0	
Total nos										
Subtotal		1.00	nos				13,522,631	965.29	234,427	
Per Unit Price		1.00	nos				13,522,631	965.29	234,427	

00-	274	Productivity correction coefficient: Asia	Labour coefficient	depending on machine coefficient	Machine coefficient	General

Item: Pile Cast in Site_P23 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=32.5m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 30-40m	= 1.90 day/nos / 0.75 = 2.533 day/nos	2.533								
Foreman	1* Days/nos * 1 person	2.53	person	21,870.00			55,396.71			Lab-1
Skilled Labour	1* Days/nos * 1 person	2.53	person	14,580.00			36,931.14			Lab-20
Scaffolder	1* Days/nos * 2 person	5.07	person	18,270.00			92,555.82			Lab-6
Unskilled Labour	1* Days/nos * 2 person	5.07	person	12,150.00			61,551.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	3.82	day	53,298	227		203,856	869		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	3.06	day	670,516			2,051,689			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	2.51	day	297,147	0		745,147	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	1.72	day	297,147	0		511,818	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	2.21	day	195,797			432,473			OPE-12
Generator	125/150kVA	3.82	day	553,278			2,116,194			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 32.5m * (1+0.12)	114.354	m3	92,558	0	0	10,584,409	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	3.112	ton	114,348	0.0	81,271	355,850	0.00	252,915	00-80
Rebar work_SD345	Arranging D29-D32	1.829	ton	80,841	0.0	83,080	147,857	0.00	151,953	00-81
Rebar work_SD345	Arranging D35	6.774	ton	126,764	0	80,321	858,696	0.00	544,094	00-225
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	3.112	nos	128,135	0.0	0	398,755	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	1.829	ton	78,633	0.0	0	143,819	0.00	0	00-84
Rebar work_SD345	Assembling D35	6.774	ton	154,137	0.0	0	1,044,124	0	0	00-229
Miscellaneous cost	31%	0.31		4,191,418	869	0	1,299,340	270	0	
Total nos										
Transportation and Disporsal fee	for disposal site including disposal fee	142.94	m3	7,754	0.0	0	1,108,330	0	0	00-74
Subtotal		1.00	nos				22,256,658	1,138.84	951,158	
Per Unit Price		1.00	nos				22,256,658	1,138.84	951,158	

00-	275	Productivity correction coefficient: Asia	Labour coefficient	depending on machine coefficient	Machine coefficient	General

Item: Pile Cast in Site_P24 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=47.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 40-50m	= 2.32 day/nos / 0.75 = 3.093 day/nos	3.093								
Foreman	1* Days/nos * 1 person	3.09	person	21,870.00			67,643.91			Lab-1
Skilled Labour	1* Days/nos * 1 person	3.09	person	14,580.00			45,095.94			Lab-20
Scaffolder	1* Days/nos * 2 person	6.19	person	18,270.00			113,018.22			Lab-6
Unskilled Labour	1* Days/nos * 2 person	6.19	person	12,150.00			75,159.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	4.67	day	53,298	227		248,925	1,062		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	3.74	day	670,516			2,505,280			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	3.06	day	297,147	0		909,886	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	2.10	day	297,147	0		624,972	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	2.70	day	195,797			528,084			OPE-12
Generator	125/150kVA	4.67	day	553,278			2,584,046			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 47.0m * (1+0.12)	165.373	m3	92,558	0	0	15,306,684	0	0	02-223
Rebar work_SD345	Arranging D13	0.028	ton	126,764	0.0	78,422	3,549	0.00	2,196	00-79
Rebar work_SD345	Arranging D16-D25	4.251	ton	114,348	0.0	81,271	486,092	0.00	345,483	00-80
Rebar work_SD345	Arranging D29-D32	9.189	ton	80,841	0.0	83,080	742,844	0.00	763,422	00-81
Rebar work_SD345	Arranging D35		ton	126,764	0	80,321	0	0.00	0	00-225
Rebar work_SD345	Assembling D13	0.028	ton	154,137	0.0	0	4,316	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	4.251	nos	128,135	0.0	0	544,700	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	9.189	ton	78,633	0.0	0	722,557	0.00	0	00-84
Rebar work_SD345	Assembling D35	0.000	ton	154,137	0.0	0	0	0	0	00-229
Miscellaneous cost	31%	0.31		5,118,064	1,062	0	1,586,600	329	0	
Total nos										
Transportation and Disporsal fee	for disposal site including disposal fee	206.72	m3	7,754	0.0	0	1,602,816	0	0	00-74
Subtotal		1.00	nos				28,702,268	1,390.60	1,111,101	
Per Unit Price		1.00	nos				28,702,268	1,390.60	1,111,101	

00- 276 Productivity correction coefficient: Asia Labour coefficient depending on machine coefficient Machine coefficient General

Item: Pile Cast in Site_P25 Reference H28MLIT 141

Specification: RCD pile ϕ 2000_L=38.0m 0.00 Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity 30-40m	= 1.90 day/nos / 0.75 = 2.533 day/nos	2.533								
Foreman	1* Days/nos * 1 person	2.53	person	21,870.00			55,396.71			Lab-1
Skilled Labour	1* Days/nos * 1 person	2.53	person	14,580.00			36,931.14			Lab-20
Scaffolder	1* Days/nos * 2 person	5.07	person	18,270.00			92,555.82			Lab-6
Unskilled Labour	1* Days/nos * 2 person	5.07	person	12,150.00			61,551.90			Lab-21
*for stand pipe, Vibratory hanmer is used										
Vibratory hanmmer 60kW	1.51*1*Days/nos	3.82	day	53,298	227		203,856	869		OPE-58
Reverse circulation dril	1.51*1*0.8*Days/nos	3.06	day	670,516			2,051,689			OPE-72
Crawler crane 50～55t hang	1*0.99*Days/nos	2.51	day	297,147	0		745,147	0		OPE-26
Crawler crane 50～55t hang	1*0.68*Days/nos	1.72	day	297,147	0		511,818	0		OPE-26
Backhoe_Full bucket0.35m3	1.09*1*0.8*Days/nos	2.21	day	195,797			432,473			OPE-12
Generator	125/150kVA	3.82	day	553,278			2,116,194			OPE-53
Class C II(for cast-in-place RC pile)	PI()/4 * 2.0m^2 * 38.0m * (1+0.12)	133.706	m3	92,558	0	0	12,375,617	0	0	02-223
Rebar work_SD345	Arranging D13	0.019	ton	126,764	0.0	78,422	2,409	0.00	1,490	00-79
Rebar work_SD345	Arranging D16-D25	2.376	ton	114,348	0.0	81,271	271,690	0.00	193,100	00-80
Rebar work_SD345	Arranging D29-D32	1.737	ton	80,841	0.0	83,080	140,420	0.00	144,310	00-81
Rebar work_SD345	Arranging D35	4.351	ton	126,764	0	80,321	551,548	0.00	349,477	00-225
Rebar work_SD345	Assembling D13	0.019	ton	154,137	0.0	0	2,929	0.00	0	00-82
Rebar work_SD345	Assembling D16-D25	2.376	nos	128,135	0.0	0	304,448	0.00	0	00-83
Rebar work_SD345	Assembling D29-D32	1.737	ton	78,633	0.0	0	136,585	0.00	0	00-84
Rebar work_SD345	Assembling D35	4.351	ton	154,137	0.0	0	670,650	0	0	00-229
Miscellaneous cost	31%	0.31		4,191,418	869	0	1,299,340	270	0	
Total nos										
Transportation and Disporsal fee	for disposal site including disposal fee	167.13	m3	7,754	0.0	0	1,295,894	0	0	00-74
Subtotal		1.00	nos				23,359,141	1,138.84	688,377	
Per Unit Price		1.00	nos				23,359,141	1,138.84	688,377	

00- 277 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Steel sheet pile Reference

Specification: PKG2_on Land 0.00 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel sheet pile	TypeIII	251.25	t	927,504	0	0	233,035,380	0	0	Mat-163
Steel sheet pile	TypeV	349.65	t	954,366	0	0	333,693,943	0	0	Mat-165
Subtotal		1.00	LS				566,729,323			
Per Unit Price		1.00	LS				566,729,323	0	0	

00- 278 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_PKG2 Reference H28MLIT P228

Specification: Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party	= 10 nos / 16 nos/day	0.625								
Foreman	1 person* daily productivity * 2.5 * party	1.563	person	21,870.00			34,171.88			Lab-1
Scaffolder	2 person* daily productivity * 2.5 * party	3.125	person	18,270.00			57,093.75			Lab-6
Unskilled Labour	1 person* daily productivity * 2.5 * party	1.563	person	12,150.00			18,984.38			Lab-21
Crawler crane	200t hang	0.625	day	2,814,362.92			1,758,976.83			OPE-46
Vibratory Hammer224kW		0.625	day	204,309.00	864.29		127,693.13	(540.18)		OPE-59
Miscellaneous cost	2%	0.02		1,996,919.97	540.18	0	39,938.40	10.80	0	
Material L=36.5m(3.39t/nos)	H-300×300×10×15	33.900	t	0.00	0.00	64,800	0.00	0.00	2,196,720	Mat-176
Depreciation		(0.70)		0.00	0.00	2,196,720	0.00	0.00	-1,537,704	
Subtotal		10.00	nos				2,036,858.37	550.98	659,016	
Per Unit Price		1.00	nos				203,686	55.10	65,902	

00- 279 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_PKG2 Reference H28MLIT P269

Specification: Guide(Frame)Falswork_Install_from Jetty Quantity・Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party										
Foreman	1.7 person* 2.5 * party	4.25	person	21,870			92,948			Lab-1
Scaffolder	3.2 person* 2.5 * party	8.00	person	18,270			146,160			Lab-6
Unskilled Labour	1.7 person* 2.5 * party	4.25	person	12,150			51,638			Lab-21
Welder	1.7 person* 2.5 * party	4.25	person	19,440			82,620			Lab-17
Miscellaneous cost	Labour costSubtotal x 4%	0.04	-	373,365		0	14,935		0	
Crawler crane	200t hang	1.000	day	2,814,363			2,814,363			OPE-46
Guide frame_Scaffolding	PKG2_P21_22(1nos)	10.000	t	0	0	66,563	0	0	665,628	02-235
Depreciation		(0.70)		0	0	665,628	0	0	-465,940	
Subtotal		10.00	t				3,202,663		199,688	
Per Unit Price		1.00	t				320,266	0	19,969	

00- 280 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Steel Pipe Sheet Pile Driving_PKG2 Reference

Specification: PKG2_from Jetty_P21_22 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P21_22(Exterior)_from Jetty	64.0	nos	6,154,215	2,915	0	393,869,764	186,586	0	01-268
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P21_22(Bulkhead)_from Jetty	8.0	nos	6,154,215	2,915	0	49,233,721	23,323	0	01-269
* Transportation of steel pipe sheet pile is included on barge section "00-284"										
Subtotal		1.00	LS				443,103,485	209,910		
Per Unit Price		1.00	LS				443,103,485	209,910	0	

00- 281 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Material cost_PKG2_from Jetty_P21_22 Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	1,212.000	t		761.76			(923,253.12)		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)		t		248.58			(0.00)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)		t		165.69			(0.00)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	111.000	t		788.94			87,572.34		Mat-268
Φ1,200	SKY490_t=14	97.000	t		850.32					Mat-269
Φ1,200	SKY490_t=16		t		877.50			(0.00)		Mat-270
φ=165.2, t =11mm, STK400		272.000	t		1,648.53			448,400.16		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	5.760	ton		3,431.25			(19,764.00)		Mat-272
(2) Welding Material	PL T=14 mm	3.456	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	1.440	ton		3,223.53			4,641.88		Mat-275
(4) Welded End Plate	PL T=12 mm	144	no		12.42			1,788.48		Mat-276
(5) Nonweld Interlocking Range		288	no		135.00			38,880.00		Mat-277
Depreciation	10%	(0.10)		0.00	1,524,299.98	0	0	(152,430)	0	
Subtotal		1.00	LS					1,371,869.98		
Per Unit Price		1.00	LS				0.00	1,371,869.98	0	

00- 282 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_PKG2_on barge Reference H28MLIT P228

Specification: Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer Quantity・Unit: 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party		= 10 nos / 16 nos/day	0.625								
Foreman		1 person* daily productivity * 2.5 * party	3.125	person	21,870.00			68,343.75			Lab-1
Scaffolder		2 person* daily productivity * 2.5 * party	6.250	person	18,270.00			114,187.50			Lab-6
Unskilled Labour		1 person* daily productivity * 2.5 * party	3.125	person	12,150.00			37,968.75			Lab-21
Crawler crane		200t hang	0.313	day	2,814,362.92			879,488.41			OPE-46
Vibratory Hammer224kW			0.313	day	204,309.00	864.29		63,846.56	(270.09)		OPE-59
Barge		2000t	0.313	day	3,192,908.65	0.00	0	997,783.95	0.00	0	Mac-d(19)
Crawler crane		200t hang	0.313	day	2,814,362.92			879,488.41			OPE-46
Vibratory Hammer224kW			0.313	day	204,309.00	864.29		63,846.56	(270.09)		OPE-59
Barge		2000t	0.313	day	3,192,908.65	0.00	0	997,783.95	0.00	0	Mac-d(19)
Tag boat	2500PS_220GT	1*0.625	0.625	day	3,201,023.54			2,000,639.71			OPE-62
Transportation	300t(105 nos/time)	1*0.625		day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day		day							OPE-68
Miscellaneous cost		2%	0.02		6,103,377.55	540.18	0	122,067.55	10.80	0	
Material	L=39.0m(3.62t/nos)	H-300×300×10×15	36.200	t	0.00	0.00	64,800	0.00	0.00	2,345,760	Mat-176
Depreciation		70%	(0.70)		0.00	0.00	2,345,760	0.00	0.00	-1,642,032	
Subtotal			10.00	nos				6,225,445.10	550.98	703,728	
Per Unit Price			1.00	nos				622,545	55.10	70,373	

00- 283 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_PKG2_on barge Reference H28MLIT P269

Specification: Guide(Frame)Falswork_Install Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party										
Foreman	1.7 person* 2.5 * party	8.5	person	21,870			185,895			Lab-1
Scaffolder	3.2 person* 2.5 * party	16.0	person	18,270			292,320			Lab-6
Unskilled Labour	1.7 person* 2.5 * party	8.5	person	12,150			103,275			Lab-21
Welder	1.7 person* 2.5 * party	8.5	person	19,440			165,240			Lab-17
Miscellaneous cost	Labour costSubtotal x 4%	0.04	-	746,730		0	29,869		0	
Crawler crane	200t hang	1.000	day	2,814,363			2,814,363			OPE-46
Barge	2000t	1.000	day	3,192,909	0	0	3,192,909	0	0	Mac-d(19)
Crawler crane	200t hang	1.000	day	2,814,363			2,814,363			OPE-46
Barge	2000t	1.000	day	3,192,909	0	0	3,192,909	0	0	Mac-d(19)
Transportation 300 ton			day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat 350PS_30GT	0.033 day		day							Mac-d(42)
Guide frame_Scaffolding	PKG2_(P14_15_16_17_18_19_20)	10.000	t	0	0	66,563	0	0	665,628	02-240
Depreciation	70%	(0.70)		0	0	665,628	0	0	(465,940)	
Subtotal		10.00	t				12,791,142		199,688	
Per Unit Price		1.00	t				1,279,114	0	19,969	

00- 284

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item: Steel Pipe Sheet Pile Driving_PKG2

Reference

Specification: PKG2_on barge

Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P14_15_16_17_18_19_20(Exterior)_on Barge	210.0	nos	12,301,653	2,915	0	2,583,347,227	612,236	0	01-270
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P14_15_16_17_18_19_20(Bulkhead)_on Barge	42.0	nos	12,287,805	2,915	0	516,087,813	122,447	0	01-271
Transportation barge 1200t(10 nos/time)	30 days * 19 months = 570 days	570.0	days	2,498,798	0	0	1,424,314,904	0	0	Mac-d(10)
Tag boat 1000PS_90GT			days							
*Depreciation base cost counted acoording to construction schedule										
Subtotal		1.00	LS				4,523,749,943	734,683		
Per Unit Price		1.00	LS				4,523,749,943	734,683	0	

counted depending on duration on "General temp. work cost"

00- 285 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Material cost_PKG2_on barge Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	4,129.757	t		761.76			###########		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)		t		248.58			(0.00)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)		t		165.69			(0.00)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	1,344.960	t		788.94			1,061,092.74		Mat-268
Φ1,200	SKY490_t=14	797.550	t		850.32					Mat-269
Φ1,200	SKY490_t=16		t		877.50			(0.00)		Mat-270
φ=165.2, t =11mm, STK400		1,149.123	t		1,648.53			1,894,363.74		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	20.160	ton		3,431.25			(69,174.00)		Mat-272
(2) Welding Material	PL T=14 mm	4.320	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	8.496	ton		3,223.53			27,387.11		Mat-275
(4) Welded End Plate	PL T=12 mm	516	no		12.42			6,408.72		Mat-276
(5) Nonweld Interlocking Range		588	no		135.00			79,380.00		Mat-277
Depreciation	10%	(0.10)		0.00	6,283,690.00	0.00	0	(628,369)	0	
Subtotal		1.00	LS					5,655,321.00		
Per Unit Price		1.00	LS				0.00	5,655,321.00	0	

00- 286 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: 鋼桁製作工 Reference

Specification: PKG2 Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Direct cost										
Material cost										
Material cost (Steel Plate)		1.00	LS	0	0	1,247,206,070	0	0	1,247,206,070	01-272
Material cost (Shapes)		1.00	LS	0	0	292,702,237	0	0	292,702,237	01-273
Material cost (HTB)		1.00	LS	0	0	32,062,074	0	0	32,062,074	01-274
Fabrication cost										
Fabrication cost of direct labour cost		1.00	LS	0	0	628,598,393	0	0	628,598,393	01-275
Painting in factory										
Blasting in factory			m2	0	0	2,338	0	0	0	01-49
Paint labour cost	C-5	46,767	m2	0	0	2,037	0	0	95,263,768	01-50
Paint labour cost	D-5	70,300	m2	0	0	1,304	0	0	91,648,704	01-53
Paint Material cost	C-5	46,767	m2	0	0	2,418	0	0	113,089,363	01-51
Paint Material cost	D-5	70,300	m2	0	0	943	0	0	66,295,712	01-52
In-Organic Zinc Rich Paint	On Steel Deck	17,500	m2	0	0	1,157	0	0	20,239,975	01-58
(Total paint material cost)		1	LS	0	0	179,385,075	0	0	179,385,075	
Indirect cost										
Indirect cost of fabrication	Direct cost * 37.6%	0.376		0	0	628,598,393	0	0	236,352,996	
Administration fee	Direct cost(without material cost)&indirect cost*28.8%	0.288		0	0	1,072,103,836	0	0	308,765,905	
Subtotal		1.00	L.S.						3132225197	
Per Unit Price		1.00	L.S.				0	0	3,132,225,197	

00- 287 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Erection of girder Reference

Specification: PKG2 Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bent instllation and removal	Steel box girder	1.00	LS	1,404,688,816	129,264	26,514,508	1,404,688,816	129,263.68	26,514,508	01-276
Scaffolding	Steel box girder	1.00	LS	0	0	119,663,721	0	0.00	119,663,721	01-277
Fall prevention / protection and Ascending ladder	Steel box girder	1.00	LS	0	0	24,199,920	0	0.00	24,199,920	01-278
Reassembling in site	Steel box girder	8,992	t	66,099	0	0	594,380,789	0.00	0	01-279
Girder erection	Steel box girder	8,992	t	96,642	0	0	869,032,952	(0.00)	0	01-280
Subtotal		1.00	L.S.				2,868,102,557	129,263.68	170,378,149	
Per Unit Price		1.00	L.S.				2,868,102,557	129,263.68	170,378,149	

00- 288 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Painting in site Reference

Specification: Steel box girder_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint in site	F-11 (Exterior)	6,000.00	m2	6,179	0	2,150	37,071,240	0	12,900,600	01-122
Paint in site	F-12 (Interior)	30,000.00	m2	5,631	0	1,253	168,923,700	0	37,592,400	01-123
Paint in site	F-13 (Exterior)	0.00	m2	7,274	0	3,943	0	0	0	01-124
Paint in site	F-14 (Interior)	0.00	m2	5,083	0	2,099	0	0	0	01-125
Painting in site	In-Organic Zinc Rich Paint		m2	5,083	0	741	0	0	0	01-126
Subtotal		1.00	LS				205,994,940		50,493,000	
Per Unit Price		1.00	LS				205,994,940	0	50,493,000	

00- 289 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Bearing setting Reference

Specification: Steel box girder_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber Bearing										
Rubber Bearing	Normal type(Steel Girder)		nos							01-128
Rubber Bearing	Separat perform type(Steel Girder)	32.00	nos	954,335	0	0	30,538,704	0	0	01-129
Bearing for Steel box girder	for P13	4	nos	0	41,662	0	0	166,648	0	Mat-365
	for P14	4	nos	0	45,581	0	0	182,322	0	Mat-366
	for P15	4	nos	0	43,331	0	0	173,322	0	Mat-367
	for P16	4	nos	0	43,331	0	0	173,322	0	Mat-368
	for P17	4	nos	0	43,331	0	0	173,322	0	Mat-369
	for P18	4	nos	0	43,331	0	0	173,322	0	Mat-370
	for P19	4	nos	0	45,581	0	0	182,322	0	Mat-371
	for P20	4	nos	0	39,821	0	0	159,282	0	Mat-372
Subtotal		1.00	LS				30,538,704	1,383,862		
Per Unit Price		1.00	LS				30,538,704	1,383,862	0	

00- 290 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Expaansion Joint setting Reference

Specification: Steel box girder_PKG2 Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Modular type	P20	20.40	m	145,941	0	1,790,000	2,977,201	0	36,515,994	01-282
Subtotal		1.00	LS				2,977,201.09		36,515,994	
Per Unit Price		1.00	LS				2,977,201.09	0.00	36,515,994	

00- 291 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site for Steel box girder Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	**Class D**	**691.00**	**m3**	105,754	0	0	**73,076,062**	**0**	**0**	**01-266**
Rebar work_SD345	Arranging D16-D25	47.595	ton	114,348	0	81,271	5,442,373	0	3,868,093	00-80
Rebar work_SD345	Assembling D16-D25	47.595	ton	128,135	0	0	6,098,565	0	0	00-83
Form work	for ordinal concrete_with&without rebar	1,734.00	m2	8,785	0	0	15,232,687	0	0	01-22
EPS		41.00	m3	0	0	19,530	0	0	800,730	Mat-444
Subtotal		1.00	LS				99,849,687		4,668,823	
Per Unit Price		1.00	LS				99,849,687	0	4,668,823	

00- 292 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Facilities and Concrete Base for Reassembling Yard Reference

Specification: (Package-2) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rail installation&remove	30 kg / m rail (2 parallel rails)	950.00	m	23,441	0.0	0	22,269,330	0	0	01-150
Equipment										
Winch	9.8 kN(1.0t) * 4 nos	1,320	day			1,630			2,151,600	CEDC-18
Carriage	60 t * 8 nos	2,640	day			2,320			6,124,800	CEDC-18
Carriage	120 t * 1 nos	330	day			26,700			8,811,000	CEDC-18
Jack	50 t, 20 mm stroke * 20 nos	6,600	day			996			6,573,600	CEDC-18
Pump (manual type) HPW-5	4 nos	1,320	day			820			1,082,400	Quatation
Base concrete	For stock yard under planned alignment	122.50	m3	103,988	0	0	12,738,529	0	0	02-64
Subtotal		1.00	LS				35,007,859		24,743,400	
Per Unit Price		1.00	LS				35,007,859	0	24,743,400	

00- 293 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Fabrication of precast segment Reference

Specification: Shortline matching method_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Standard section										
Concrete for PC box in Yard	Class A	4,160	m3	149,885	0	0	623,520,227	0	0	01-190
Re-bar work_SD345_D10-13	for PC box in yard construction	360.000	t	304,581	0	56,376	109,649,282	0	20,295,360	01-191
Re-bar work_SD345_D16-25	for PC box in yard construction	180.000	t	348,267	0	78,337	62,688,116	0	14,100,604	01-192
Internal prestressing strands(for deck)	Installation_Crossbeam_3 S 12.7	10,747.60	m	4,693	0	768	50,435,477	0	8,259,101	02-175
Internal prestressing strands(for deck)	Presstressing_Crossbeam_3 S 12.7	1,096	Cable	122,066	0	0	133,784,413	0	0	02-176
Widened section										
Short line matching cast yard instllation										
Concrete foundation of Manufacture equipment		1	L.S	265,818,489	0	804,573	265,818,489	0	804,573	01-215
Equipment of segment fabrication yard		1	L.S	246,294,667	473,525	6,764,559	246,294,667	473,525	6,764,559	01-216
Short line equipment		1	L.S	76,793,397	0	8,630,984	76,793,397	0	8,630,984	01-217
Embedded materials cost of Segment	PKG2	1	LS	0	0	8,728,409	0.00	(0.00)	8,728,408.80	02-268
Subtotal		1.00	LS				1,568,984,069	473,525	67,583,589	
Per Unit Price		1.00	LS				1,568,984,069	473,525	67,583,590	

00-　294　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item: Erection　Reference

Specification: Span by span method_PKG2　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection girder instration and removal										
Fabrication of erection girder	Including hydroric hanging equipment	1	LS	87,047,444	0	122,524,217	87,047,444		122,524,217	01-220
							0		0	
Bent foundation (on land)	Concrete foundation	140	m3	103,988	0	0	14,558,319		0	01-222
Bent equipment instllation and demolition (on land)	2 time assembly	1	LS	95,727,391	0	0	95,727,391		0	01-223
Erection girder assembly and demolition	for Span by Sapn method	2	set	47,262,325	0	0	94,524,649		0	01-224
Erection of Segment										
Movement and instllation of SBS girder	to next span	8	time	5,844,605	0	0	46,756,836		0	01-225
Segment erection		192	SEG	860,444	0	40,276	165,205,269		7,732,959	01-227
Segment connection		1	LS	32,520,842	0	721,546	32,520,842		721,546	01-228
Transportation										
Standard section										
Transportation in site	Special trailer 60 t	4.50	month	13,594,952	0	0	61,177,284		0	01-213
Subtotal		1.00	LS				597,518,033		130,978,722	
Per Unit Price		1.00	LS				597,518,033	0	130,978,722	

00- 295 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Prestressing Reference

Specification: PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
External prestressing strands_PKG2	Type 19 S 15.2	1	LS	117,296,814	0	82,638,046	117,296,814	0	82,638,046	01-243
Internal prestressing strands_PKG2	Type 12 S 15.2	1	LS	130,794,188	0	21,823,448	130,794,188	0	21,823,448	01-244
Internal prestressing strands(for deck)_PKG2	Type 3 S 12.7	1	LS	15,803,245	0	708,904	15,803,245	0	708,904	01-245
Internal prestressing strands(for crossbeam)_PKG2	Type 4 S 15.2 (Horizontal)	1	LS	6,403,632	0	181,710	6,403,632	0	181,710	01-247
Prestressing steel bar (for crossbeam)_PKG2	D32 (Vertical prestressing)	1	LS	54,586,032	0	3,439,080	54,586,032	0	3,439,080	01-248
Subtotal		1.00	LS				324,883,911		108,791,188	
Per Unit Price		1.00	LS				324,883,911	0	108,791,188	

00-　296　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item: Bearing setting　Reference

Specification: PC Box(PKG2)　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber_bearing										
Bearing setting	Rubber Bearing_Separat perform type	28.00	nos	792,138	0	0	22,179,858	0	0	01-237
Bearing for PC box girder	for P20	4.00	nos	0	42,390	0	0	169,560	0	Mat-381
Bearing for PC box girder	for P21	4.00	nos	0	76,508	0	0	306,032	0	Mat-382
Bearing for PC box girder	for P22	4.00	nos	0	76,508	0	0	306,032	0	Mat-383
Bearing for PC box girder	for P23	4.00	nos	0	71,206	0	0	284,825	0	Mat-384
Bearing for PC box girder	for P24	4.00	nos	0	76,508	0	0	306,032	0	Mat-385
Bearing for PC box girder	for P25	4.00	nos	0	81,671	0	0	326,682	0	Mat-386
Bearing for PC box girder	for A2	4.00	nos	0	43,618	0	0	174,470	0	Mat-387
Subtotal		1.00	LS				22,179,858	1,873,634		
Per Unit Price		1.00	LS				22,179,858	1,873,634	0	

00-　297　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Expansion joint setting　Reference　H24MLIT P216

Specification: PC Box_PKG2　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Modular type	for PC box_A2	1.00	nos	2,343,822	0	25,065,000	2,343,822	0	25,065,000	01-242
Subtotal		1.00	LS				2,343,822		25,065,000	
Per Unit Price		1.00	LS				2,343,822	0	25,065,000	

00- 298 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site_PKG1_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	Class D	56.00	m3	99,456	0	0	5,569,552	0	0	00-51
Rebar work_SD345	Arranging D13	4.000	ton	126,764	0.0	78,422	507,054	0.00	313,688	00-79
Rebar work_SD345	Assembling D13	4.000	nos	154,137	0.0	0	616,548	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	185.00	m2	8,785	0	0	1,625,171	0	0	01-22
Subtotal		1.00	LS				8,318,325		313,688	
Per Unit Price		1.00	LS				8,318,325	0	313,688	

00- 299 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site_PC box_PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	278.00	m3	99,456	0	0	27,648,849	0	0	00-51
Rebar work_SD345	Arranging D13	20.400	ton	126,764	0.0	78,422	2,585,976	0.00	1,599,809	00-79
Rebar work_SD345	Assembling D13	20.400	nos	154,137	0.0	0	3,144,393	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	1,402.20	m2	8,785	0	0	12,317,920	0	0	01-22
Subtotal		1.00	LS				45,697,138		1,599,809	
Per Unit Price		1.00	LS				45,697,138	0	1,599,809	

00- 300 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site_PC box_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	336.00	m3	99,456	0	0	33,417,313	0	0	00-51
Rebar work_SD345	Arranging D13	23.400	ton	126,764	0.0	78,422	2,966,266	0.00	1,835,075	00-79
Rebar work_SD345	Assembling D13	23.400	nos	154,137	0.0	0	3,606,804	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	1,682.20	m2	8,785	0	0	14,777,639	0	0	01-22
Subtotal		1.00	LS				54,768,023		1,835,075	
Per Unit Price		1.00	LS				54,768,023	0	1,835,075	

00- 301

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier Fabrication

Reference H28国基 PIV-7-1-1

Specification : PC box_PKG2

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		689.12	nos			26,900			18,537,449	
G	71.784ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	53.531	ton	0	0	81,000	0	0	4,335,991	Mat-253
SS400	L300	9.343	ton	0	0	72,900	0	0	681,072	Mat-151
M16*40		0.288	ton	0	0	1,342,640	0	0	386,455	
Hot-Dip Galvanization	HDZ55	71.78	t			55,800			4,005,536	Mat-415
Rebar work_SD345	Arranging D16-D25	7.400	ton	114,348	0	81,271	846,136	0	601,379	00-80
Rebar work_SD345	Assembling D16-D25	7.400	ton	128,135	0	0	948,155	0	0	00-83
Subtotal		1.00	LS				1,794,291		28,547,881	
Per Unit Price		1.00	LS				1,794,291	0	28,547,881	

00- 302 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Drainage work Reference H25MLIT P880

Specification: PC box_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Catch Basin Fabrication	0	30.00	nos	2,182	0	53,767	65,470	0	1,613,011	01-136
Anchor bolt setting for concrete			nos	1,205	0	205	0	0	0	01-137
Drainage Pipe Installation	PVC pipe	290.00	m	35,687	0	0	10,349,108	0	0	01-176
Catch basin setting		30.00	nos	11,522	0	0	345,656	0	0	01-138
Subtotal		1.00	LS				10,760,234		1,613,011	
Per Unit Price		1.00	LS				10,760,234	0	1,613,011	

00- 303 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Concret work_other material installation_PKG2 Reference Quantity計算書 CDS-63

Specification: Reinforced Retaining Wall (Type 1) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	588.98	m3	99,456	0	0	58,577,766	0	0	00-51
Form work	for ordinal concrete_with&without rebar	2,289.92	m2	8,785	0	0	20,116,283	0	0	01-22
Rebar work_SD345	Arranging D13	34.98	ton	114,348	0	81,271	4,000,221	0	2,843,103	00-80
Rebar work_SD345	Assembling D13	34.98	ton	154,137	0	0	5,392,172	0	0	00-82
Rebar work_SD345	Arranging D16-D25		ton	114,348	0	81,271	0	0	0	00-80
Rebar work_SD345	Assembling D16-D25	0.000	nos	128,135	0	0	0	0	0	00-83
Joint filler	t=10mm	77.37	m2	0	0	351	0	0	27,157	Mat-441
Joint filler	t=20mm	9.02	m2	0	0	702	0	0	6,332	Mat-442
Rubber Plate	t=10mm (10x300x600)	116.70	m2	0	0	11,610	0	0	1,354,887	Mat-443
Styrene Foam	b=50mm (50x500x1000)		m3	0	0	19,530	0	0	0	Mat-444
Geotextile		1,319.53	m2	0	0	324	0	0	427,528	Mat-445
Subtotal		1.00	LS				88,086,442		4,659,007	
Per Unit Price		1.00	LS				88,086,442	0	4,659,007	

00- 304 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Base concrete of Reinforced Retaining Wall (Type 1)_PKG2 Reference

Specification: Base concrete Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work(1)	18N/mm2	89.26	m3	95,194	0	0	8,497,057	0.00	0	00-52
Form work	for ordinal concrete_with&without rebar	166.7	m2	8,784.71	0.00	0.00	1,464,411	0.00	0	01-22
Subtotal		1.00	LS				9,961,467.77			
Per Unit Price		1.00	LS				9,961,467.77	0.00	0	

00- 305 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item: Road base Reference H24MLIT P495

Specification: Base course t=100mm Quantity・Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.24(person)×1(Layer)	0.24	person	12,150.00			2,916.00			Lab-21
Base course material		12.70	m3	18,434.29			234,115.48			Mat-52
Motor grader	3.1m	0.11	日	324,440.00			34,386.86			OPE-16
Road roller	10-12t	0.11	日	226,584.00			24,015.26			OPE-18
Tire roller	8-20t	0.11	日	270,040.00			28,621.09			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*9%	0.09	-	89,939.21		0	8,094.53		0	
100m2 requires Base course material amount =100m2×0.10m×(1+0.27)=12.7(m3)										
Maximun t of 1 layer =150mm, 1Layer in total										
Daily productivity =1,110(m2/day/layer)										
100m2 required work days=100(m2)/daily productivity(m2/day/layer)×1(Layer)=100/1,110/85%1=0.11(day)										
Miscellaneous cost is cost for sprinkling water										
Subtotal		100.00	m2				332,149.22			
Per Unit Price		1.00	m2				3,321.49	0.00	0	

00-　306　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Steel Pipe Sheet Pile Driving　Reference

Specification: Cable stayed bridge(350 t CC & 275 t CC)　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Exterior)		nos	971,180	25,538	0	0	0	0	01-15
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Bulkhead)	32.0	nos	982,450	27,800	0	31,438,398	889,612	0	01-27
Subtotal		1.00	LS				31,438,398	889,612		
Per Unit Price		1.00	LS				31,438,398	889,612	0	

00- 307 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Lightning work Reference

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
照明柱	高架橋用 φ200mm H=12m	63.00	nos	0	0	295,650	0	0	18,625,950	E-2
照明柱	オンランプ用 φ175mm H=9m	35.00	nos	0	0	263,250	0	0	9,213,750	E-3
灯具	高架橋用 140W LED	63.00	set	0	0	193,050	0	0	12,162,150	E-6
灯具	オンランプ用 51W LED	35.00	set	0	0	193,050	0	0	6,756,750	E-5
灯具	交差点用400W HID (S-Metal)	5.00	set	0	0	162,000	0	0	810,000	E-9
警告灯	自立型、LED	1.00	set	0	0	1,620,000	0	0	1,620,000	E-34
照明分電盤	17回路,タイマー,切替スイッチ	4.00	set	0	0	100,035	0	0	400,140	E-10
配管工事	HDPE(50)	10,185.00	m	0	0	2,903	0	0	29,561,963	E-23
配管工事	FPE(25)	207.00	m	0	0	783	0	0	162,081	E-26
配管工事	GP100	800.00	m	0	0	11,259	0	0	9,007,200	E-28
配線工事	XLPE 25mm2－4C	2,016.00	m	0	0	1,933	0	0	3,897,331	E-18
配線工事	XLPE 16mm2－4C	1,404.00	m	0	0	878	0	0	1,232,010	E-19
配線工事	XLPE 10mm2－4C	1,820.00	m	0	0	567	0	0	1,031,940	E-20
配線工事	XLPE 8mm2－4C	3,696.00	m	0	0	518	0	0	1,916,006	E-21
プルボックス	Stainless, 300x350x200	112.00	set	0	0	4,374	0	0	489,888	E-12
ハンドホール	600x600x1200	2.00	set	0	0	128,250	0	0	256,500	E-29
接地極銅板	600mmx1.5t	6.00	set	0	0	20,250	0	0	121,500	E-15
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						97,265,159	
Per Unit Price		1.00	LS				0	0	97,265,159	

00- 308 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Traffic signal work Reference

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
信号柱	車道用,アーム形,5.3m高,	9.00	nos	0	0	418,500	0	0	3,766,500	E-2-1
	歩道用,長管,3m高	9.00	nos	0	0	2,390	0	0	21,506	E-2-2
信号機	車道用。LED, 緑ー黄ー赤	12.00	set	0	0	580,500	0	0	6,966,000	E-2-3
	車道用、LED,矢印	8.00	set	0	0	189,000	0	0	1,512,000	E-2-4
	歩道用、LED, 手形、人形、2色	18.00	set	0	0	189,000	0	0	3,402,000	E-2-5
	歩道 押しボタン	18.00	set	0	0	58,050	0	0	1,044,900	E-2-5
コントロールボックス	多段式定周期制御式	1.00	set	0	0	1,039,500	0	0	1,039,500	E-2-7
配電盤	3回路	1.00	set	0	0	41,040	0	0	41,040	E-2-1
接続端子ボックス	36端子	18.00	set	0	0	101,250	0	0	1,822,500	E-2-1
配管工事	HDPE(25)	208.00	m	0	0	1,084	0	0	225,482	E-2-9
	HDPE(50)	309.00	m	0	0	2,903	0	0	896,873	E-2-8
	GP100	150.00	m	0	0	11,259	0	0	1,688,850	E-2-1
配線工事	svv 2.0sqmmx4c	302.00	m	0	0	240	0	0	72,571	E-2-16
	svv 2.0sqmmx8c	162.00	m	0	0	419	0	0	67,797	E-2-17
	svv-ss 2.0sqmmx4c	77.00	m	0	0	375	0	0	28,898	E-2-10
	svv-ss 2.0sqmmx15c	157.00	m	0	0	1,034	0	0	162,354	E-2-11
	svv-ss 2.0sqmmx18c	69.00	m	0	0	1,034	0	0	71,353	E-2-12
	svv-ss 2.0sqmmx21c	32.00	m	0	0	1,535	0	0	49,118	E-2-13
	svv-ss 2.0sqmmx33c	10.00	m	0	0	1,535	0	0	15,350	E-2-14
ハンドホール	600x600x800	15.00	set	0	0	97,200	0	0	1,458,000	E-2-6
接地極銅板	600mmx1.5t	2.00	set	0	0	20,250	0	0	40,500	E-15
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						24,393,092	
Per Unit Price		1.00	LS				0	0	24,393,092	

00-　309　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Power supply equipment　Reference

Specification: PKG1　Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
受電柱	コンクリート柱、装柱、がいし、15m高	1.00	基	0	0	292,005	0	0	292,005	E-29
受電盤設備	LA, PC,電力積算計、トランス(100kva)	1.00	基	0	0	589,275	0	0	589,275	E-29
発電機設備	自家発、3相4線　パッケイジ型 50KVA、	1.00	基	0	0	675,000	0	0	675,000	E-29
主配電盤	主300AF,支50AF	1.00	基	0	0	151,470	0	0	151,470	E-29
配管工事 LP盤迄	HDPE (100) LP1	100.00	m	0	0	4,590	0	0	459,000	E-24
配管工事 LP盤迄	HDPE (50) LP2	80.00	m	0	0	2,903	0	0	232,200	E-23
配管工事 LP盤迄	HDPE (50) LP3	80.00	m	0	0	2,903	0	0	232,200	E-23
配管工事 LP盤迄	HDPE (50) LP4	120.00	m	0	0	2,903	0	0	348,300	E-23
配管工事 LP盤迄	HDPE (50) LP5	150.00	m	0	0	2,903	0	0	435,375	E-23
配線工事 LP盤迄	XLPE 35mm2－4C (LP1)	780.00	m	0	0	2,025	0	0	1,579,500	E-17
配線工事 LP盤迄	XLPE 25mm2－4C (LP4)	312.00	m	0	0	1,933	0	0	603,158	E-18
配線工事 LP盤迄	XLPE 10mm2－4C (LP1)	130.00	m	0	0	567	0	0	73,710	E-20
配線工事 LP盤迄	XLPE 8mm2－4C (LP1, LP2, LP3)	676.00	m	0	0	518	0	0	350,438	E-21
プルボックス	Stainless, 550x200x600 (LP1)	220.00	個	0	0	8,775	0	0	1,930,500	E-13
ハンドホール	600x600x600	12.00	基	0	0	97,200	0	0	1,166,400	E-30
接地極銅板	600mmx1.5t	2.00	基	0	0	20,250	0	0	40,500	E-15
保安フェンス	1.2m高	20.00	m	0	0	12,150	0	0	243,000	E-29
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						9,402,031	
Per Unit Price		1.00	LS				0	0	9,402,031	

00-　　310　　Productivity correction coefficient: Asia　　Labour coefficient　　Machine coefficient

Item:　Illumination for tower　　Reference

Specification:　PKG1　　Quantity･Unit:　1　LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
投光器	LED 380W	12.0	基	0	0	283,500	0	0	3,402,000	E-8
配電盤	主MCCB 200AF、4回路	4.0	台	0	0	100,035	0	0	400,140	E-11
配管工事	HDPE (50)	480.0	m	0	0	2,903	0	0	1,393,200	E-23
配線工事	XLPE 35mm2－4C	1,200.0	m	0	0	2,025	0	0	2,430,000	E-17
配線工事	XLPE 10mm2－4C	1,200.00	m	0	0	567	0	0	680,400	E-20
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						8,305,740	
Per Unit Price		1.00	LS				0	0	8,305,740	

00- 311 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Obstacle light Reference

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
障害灯	LED、白色、中光度、25W	2.0	基	0	0	1,350,000	0	0	2,700,000	E-35
制御盤	ICAO基準、ホトセンサー付き	2.0	台	0	0	675,000	0	0	1,350,000	E-36
配管工事	HDPE (50)	130.0	m	0	0	2,903	0	0	377,325	E-23
配管工事	HDPE (25)	25.0	m	0	0	1,215	0	0	30,375	E-22
配線工事	CV2.0mm2－2C	65.00	m	0	0	130	0	0	8,424	E-38
配線工事	CV5.5 mm2－1C	65.00	m	0	0	247	0	0	16,058	E-39
配線工事	CVVS2.0 mm2－4Cx3	65.00	m	0	0	207	0	0	13,426	E-42
配線工事	CVVS2.0 mm2－6C	20.00	m	0	0	317	0	0	6,345	E-43
プルボックス	Stainless, 400x300x200	6.00	個	0	0	6,750	0	0	40,500	E-14
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						4,542,453	
Per Unit Price		1.00	LS				0	0	4,542,453	

00- 312 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Navigation sign & light Reference

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
橋梁標	左側端標、LED障害灯(IALA基準)	4.0	基	0	0	1,350,000	0	0	5,400,000	E-44
橋梁標	右側端標、LED障害灯(IALA基準)	4.0	基	0	0	1,350,000	0	0	5,400,000	E-45
橋梁標	中央標、LED障害灯(IALA基準)	2.0	基	0	0	1,350,000	0	0	2,700,000	E-46
制御盤	ILALA基準、ホトセンサー付き	1.0	台	0	0	264,600	0	0	264,600	E-47
配管工事	HDPE (50)	1,120.00	m	0	0	2,903	0	0	3,250,800	E-23
配管工事	HDPE (25)	28.00	m	0	0	1,215	0	0	34,020	E-22
配管工事	FEP (25)	28.00	m	0	0	270	0	0	7,560	E-25
配線工事	CV 6.6mm2－2C	65.00	m	0	0	243	0	0	15,795	E-40
配線工事	CV 16mm2－2C	1,120.00	m	0	0	554	0	0	619,920	E-41
配線工事	CV 2.0mm2－2C	30.00	m	0	0	130	0	0	3,888	E-38
配線工事	CV 0.75mm2－2C	30.00	m	0	0	74	0	0	2,228	E-37
ジョイントボックス	Stainless, 200x200x150	10.00	個	0	0	6,075	0	0	60,750	E-48
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						17,759,561	
Per Unit Price		1.00	LS				0	0	17,759,561	

00-　313　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Lightning conductor　Reference

Specification: PKG1　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
避雷針	避雷突針	2.0	本	0	0	27000	0	0	54,000	E-49
避雷針	支持管 SUS4000mm	2.0	本	0	0	67500	0	0	135,000	E-49
避雷針	支持管取付金物 SUS	2.0	組	0	0	12825	0	0	25,650	E-49
避雷導線	銅導線 30mm2	20.0	m	0	0	702	0	0	14,040	E-50
避雷導線端子	接地用導線引出し端子	12.00	個	0	0	13230	0	0	158,760	E-51
避雷導線端子	導線接続端子	4.00	個	0	0	4050	0	0	16,200	E-52
避雷導線端子	導線用水切端子	4.00	個	0	0	5670	0	0	22,680	E-52
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						426,330	
Per Unit Price		1.00	LS				0	0	426,330	

00- 314 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Lightning work Reference

Specification: PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
照明柱	高架橋用 φ200mm H=12m	64.0	本	0	0	295,650	0	0	18,921,600	E(2)-2
照明柱	料金所広場 φ350mmH＝25m、取付金具	2.0	本	0	0	405,000	0	0	810,000	E(2)-4
灯具	高架橋用 140W LED	64.0	基	0	0	193,050	0	0	12,355,200	E(2)-6
灯具	投光器 380WLED	16.0	基	0	0	283,500	0	0	4,536,000	E(2)-8
警告灯	LED灯点滅	1.00	基	0	0	1,620,000	0	0	1,620,000	E(2)-34
照明分電盤	17回路、タイマー、切替スイッチ	3.00	台	0	0	99,900	0	0	299,700	E(2)-10
配管工事	HDPE(50)	7,680.00	m	0	0	2,903	0	0	22,291,200	E(2)-23
配管工事	HDPE(50) 料金所広場	8,240.00	m	0	0	2,903	0	0	23,916,600	E(2)-23
配管工事	FPE(50)	96.00	m	0	0	783	0	0	75,168	E(2)-26
配線工事	XLPE 25mm2－4C	4,200.00	m	0	0	1,933	0	0	8,119,440	E(2)-18
配線工事	XLPE 8mm2－4C （投光器）	190.00	m	0	0	518	0	0	98,496	E(2)-21
配線工事	XLPE 8mm2－4C	2,184.00	m	0	0	518	0	0	1,132,186	E(2)-21
プルボックス	Stainless, 300x350x200	64.00	基	0	0	4,374	0	0	279,936	E(2)-12
接地極銅板	600mmx1.5t	2.00	基	0	0	20,250	0	0	40,500	E(2)-15
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						94,496,026	
Per Unit Price		1.00	LS				0	0	94,496,026	

00- 315 Productivity correction coefficient: Asia | Labour coefficient | Machine coefficient

Item: Power supply equipment | Reference

Specification: PKG2 | Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
受電柱	コンクリート柱、装柱、がいし、15m高	1.0	基	0	0	288,360	0	0	288,360	E(2)-**
受電盤設備	LA, PC、電力積算計	1.0	基	0	0	589,275	0	0	589,275	E(2)-**
受電盤設備	屋外キュービクル受電設備 (200KVA)	1.0	基	0	0	4,050,000	0	0	4,050,000	E(2)-**
発電機設備	自家発 3相4線　屋外パッケイジ型 (200KVA)、	1.0	基	0	0	5,670,000	0	0	5,670,000	E(2)-**
主配電盤	主300AF,支50AF	1.00	基	0	0	151,470	0	0	151,470	E(2)-**
配管工事　LP盤迄	HDPE (100)　料金所MDP	400.00	m	0	0	4,590	0	0	1,836,000	E(2)-24
配管工事　LP盤迄	HDPE (50)　LP8	300.00	m	0	0	2,903	0	0	870,750	E(2)-23
配管工事　LP盤迄	HDPE (50)　LP9	200.00	m	0	0	2,903	0	0	580,500	E(2)-23
配線工事　LP盤迄	XLPE 80mm2－4C (料金所MDP)	260.00	m	0	0	4,185	0	0	1,088,100	E(2)-16
配線工事　LP盤迄	XLPE 35mm2－4C　(LP8)	390.00	m	0	0	2,025	0	0	789,750	E(2)-17
配線工事　LP盤迄	XLPE 8mm2－4C　(LP9)	260.00	m	0	0	518	0	0	134,784	E(2)-21
ハンドホール	600x600x600	12.00	基	0	0	97,200	0	0	1,166,400	E(2)-30
接地極銅板	600mmx1.5t	3.00	基	0	0	20,250	0	0	60,750	E(2)-15
Labour cost	35%	1.35	%							
Subtotal		1.00	LS						17,276,139	
Per Unit Price		1.00	LS				0	0	17,276,139	

00-　316　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_22-30m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	4 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.25	person	21,870.00			5,467.50			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.50	person	14,580.00			7,290.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.25	person	12,150.00			3,037.50			Lab-21
Deep layer mixing machin 90kw_30m	1 / daily productivity (nos/day)	0.25	day	47,880.00		290,400	11,970.00		72,600	OPE-79
Cement slurry plant 20m3/h	1 / daily productivity (nos/day)	0.25	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		27,765.00	0.00	72,600	7,218.90	(0.00)	18,876	
*Cement material is counted in other sheet										
Subtotal		1.00	set				34,983.90		91,476	
Per Unit Price		1.00	set				34,983.90	0.00	91,476	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　317　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_15-18m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	6 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.17	person	21,870.00			3,645.00			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.33	person	14,580.00			4,860.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.17	person	12,150.00			2,025.00			Lab-21
Deep layer mixing machin 90kw_30m	1 / daily productivity (nos/day) / 0.75	0.22	day	47,880.00		290,400	10,640.00		64,533	OPE-79
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.22	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		21,170.00	0.00	64,533	5,504.20	(0.00)	16,779	
*Cement material is counted in other sheet										
Subtotal		1.00	set				26,674.20		81,312	
Per Unit Price		1.00	set				26,674.20	0.00	81,312	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00- 318 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: (Original design)Steel Pipe Sheet Pile Driving Reference

Specification: PC box bridge(350 t CC & 275 t CC) Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Exterior)	116.0	nos	971,180	25,538	0	112,656,872	2,962,355	0	01-15
Steel Pipe driving_(Driving Length48-64m)_φ1200	Cable stayed bridge(Bulkhead)	18.0	nos	982,450	27,800	0	17,684,099	500,407	0	01-27
Transportation barge 1200t(10 nos/time)	30 days * 6 months = 180 days	180.0	days	2,498,798	0	0	449,783,654	0	0	Mac-d(10)
Tag boat 1000PS_90GT			days							
*Depreciation base cost counted acoording to construction schedule										
Subtotal		1.00	LS				580,124,624	3,462,762		
Per Unit Price		1.00	LS				580,124,624	3,462,762	0	

Based on PKG2 schedule

counted depending on duration on "General temp. work cost"

00- 319 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: (Original design)Material cost Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	2,793.000	t		761.76			###########		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)		t		248.58			(0.00)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)		t		165.69			(0.00)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	0.000	t		788.94			0.00		Mat-268
Φ1,200	SKY490_t=14		t		850.32					Mat-269
Φ1,200	SKY490_t=16		t		877.50			(0.00)		Mat-270
φ=165.2, t =11mm, STK400		490.000	t		1,648.53			807,779.70		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	8.694	ton		3,431.25			(29,831.29)		Mat-272
(2) Welding Material	PL T=14 mm	0.507	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	5.616	ton		3,223.53			18,103.34		Mat-275
(4) Welded End Plate	PL T=12 mm	268	no		12.42			3,328.56		Mat-276
(5) Nonweld Interlocking Range		268	no		135.00			36,180.00		Mat-277
Depreciation	10%	(0.10)		0.00	3,022,818.57	0.00	0	(302,282)	0	
Subtotal		1.00	LS					2,720,536.71		
Per Unit Price		1.00	LS				0.00	2,720,536.71	0	

00-　320　Productivity correction coefficient: ASIA　Labour coefficient　Machine coefficient

Item: (Original Design)Fabrication of precast segment　Reference

Specification: Short line matching method　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Standard section										
Concrete for PC box in Yard	Class A	3,460	m3	149,885	0	0	518,600,958	0	0	01-190
Re-bar work_SD345_D10-13	for PC box in yard construction	300.000	t	304,581	0	56,376	91,374,402	0	16,912,800	01-192
Re-bar work_SD345_D16-25	for PC box in yard construction	150.000	t	348,267	0	78,337	52,240,097	0	11,750,504	01-193
Widened section										
Short line matching cast yard instllation										
Concrete foundation of Manufacture equipment			L.S	265,818,489	0	804,573	0	0	0	01-215
Equipment of segment fabrication yard			L.S	246,294,667	473,525	6,764,559	0	0	0	01-216
Short line equipment			L.S	76,793,397	0	8,630,984	0	0	0	01-217
Embedded materials cost of Segment		1	LS	0	0	7,300,986	0	(0.00)	7,300,986.30	02-106
Subtotal		1.00	LS				662,215,457		35,964,290	
Per Unit Price		1.00	LS				662,215,457	0	35,964,290	

00-　321　Productivity correction coefficient:　Labour coefficient　Machine coefficient

Item:　(Original Design)Erection　Reference

Specification:　Span by Span method　Quantity･Unit:　1　LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection girder instration and removal										
Fabrication of erection girder	Including hydroric hanging equipment		LS	87,047,444	0	122,524,217	0		0	01-220
							0		0	
Bent foundation (on land)	Concrete foundation		m3	103,988	0	0	0		0	01-222
Bent equipment instllation and demolition (on land)	2 time assembly		LS	95,727,391	0	0	0		0	01-223
Erection girder assembly and demolition	for Span by Sapn method		set	47,262,325	0	0	0		0	01-224
Erection of Segment										
Movement and instllation of SBS girder	to next span	8	time	5,844,605	0	0	46,756,836		0	01-225
Segment erection		160	SEG	860,444	0	40,276	137,671,058		6,444,133	01-227
Segment connection		1	LS	32,520,842	0	721,546	32,520,842		721,546	01-228
Transportation										
Standard section										
Transportation in site	Special trailer 60 t	9.00	month	13,594,952	0	0	122,354,567		0	01-213
Subtotal		1.00	LS				339,303,303		7,165,679	
Per Unit Price		1.00	LS				339,303,303	0	7,165,679	

00- 322 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Painting in site Reference

Specification: Tower and Girder Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Painting in site	F-15 (Exterior)	1,175.50	m2	6,179	0	453	7,262,874	0	532,748	01-287
Painting in site	F-16 (Interior)	2,852.80	m2	3,988	0	1,575	11,375,683	0	4,493,674	01-288
Painting in site	F-15 (Exterior)	1,653.90	m2	6,179	0	453	10,218,687	0	749,564	01-287
Painting in site	F-16 (Interior)	730.30	m2	3,988	0	1,575	2,912,108	0	1,150,354	01-288
Painting in site	In-Organic Zinc Rich Paint	6,180.20	m2	5,083	0	741	31,414,204	0	4,579,528	01-126
Subtotal		1.00	LS				63,183,555		11,505,868	
Per Unit Price		1.00	LS				63,183,555	0	11,505,868	

00- 323 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Painting in site Reference

Specification: Steel box girder_PKG2 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint in site	F-15 (Exterior)	6,000.00	m2	6,179	0	453	37,071,240	0	2,719,260	01-287
Paint in site	F-16 (Interior)	30,000.00	m2	3,988	0	1,575	119,626,500	0	47,255,400	01-288
Paint in site	F-15 (Exterior)	0.00	m2	6,179	0	453	0	0	0	01-287
Paint in site	F-16 (Interior)	0.00	m2	3,988	0	1,575	0	0	0	01-288
Painting in site	In-Organic Zinc Rich Paint		m2	5,083	0	741	0	0	0	01-126
Subtotal		1.00	LS				156,697,740		49,974,660	
Per Unit Price		1.00	LS				156,697,740	0	49,974,660	

00- 324 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Outlet_TypeA_Right Reference JICA study team

Specification: PKG1 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Box Culvert fabrication	1000*1000	5.24	m	247,447	0	9,564	1,295,386	0	50,068	01-261
Concrete work(1)	18N/mm2	2.79	m3	95,194	0	0	265,973	0	0	00-52
Concrete work	24N/mm2	15.85	m3	99,456	0	0	1,575,885	0	0	00-51
Form work	for ordinal concrete_with&without rebar	63.94	m2	8,785	0	0	561,712	0	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	5.59	m3	918	0	0	5,128	0	0	01-17
Rebar work_SD345	Arranging D13	1.190	ton	126,764	0	78,422	150,849	0	93,322	00-79
Rebar work_SD345	Assembling D13	1.190	ton	154,137	0	0	183,423	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.295	ton	114,347.57	0.00	81,271.00	33,732.53	0.00	23,975	00-80
Rebar work_SD345	Assembling D16-D25	0.295	nos	128,134.58	0.00	0.00	37,799.70	0.00	0	00-83
Excavation	Excavation for foundation	221.74	m3	1,611	0	0	357,108	0	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material	78.23	m3	20,940	0	0	1,638,091	0	0	00-76
Rip rap setting	for Outlet	3.9	m3	48,803	0	0	190,332	0	0	01-289
Subtotal		1.00	LS				6,295,419		167,365	
Per Unit Price		1.00	LS				6,295,419	0	167,365	

00- 325 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Catch Pit Reference JICA study team

Specification: B/L=0.6/0.6m,H=1.1m Quantity・Unit: 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	0.94	m3	99,456.29	0.00	0	93,787.28	(0.00)	0	00-51
Concrete work(1)	18N/mm2	0.12	m3	95,194.45	0.00	0	11,042.56	(0.00)	0	00-52
Form work	for ordinal concrete_with&without rebar	8.78	m2	8,784.71	0.00	0	77,129.75	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow material		m3	917.60	0.00	0	0.00	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.151	ton	126,764	0.0	78,422	19,108	0.00	11,821	00-79
Rebar work_SD345	Assembling D13	0.151	ton	154,137	0.0	0	23,235	0.00	0	00-82
Excavation	Excavation for foundation		m3	1,610.51	0.00	0	0.00	0.00	0	00-36
Backfilling	Class_C,1m＜W1＜4m_Borrow material		m3	20,940.23	0.00	0	0.00	0.00	0	00-76
PVC Pipe	200mm	0.85	m	31,640.63	0.00	0	26,894.54	0.00	0	Mat-29
PVC Pipe	200mm / Elbow 45°	2.00	nos	81,021.63	0.00	0	162,043.26	0.00	0	Mat-30
Subtotal		1.00	nos				413,240.32		11,821	
Per Unit Price		1.00	nos				413,240.32	0.00	11,821	

00- 326 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Monitoring Equipment Reference JICA study team

Specification: Equipment cost Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Monitoring equipment cost	for 2 towers	1.00	LS			1,474,600			1,474,600	
Monitoring equipment cost	for 2 Abutment	1.00	LS			3,496,500			3,496,500	
Subtotal		1.00	LS						4,971,100	
Per Unit Price		1.00	LS				0.00	0.00	4,971,100	

00- 327 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient none

Item: Monitoring Equipment Reference JICA study team

Specification: Setting cost Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation		6.00	person			35,000			210,000	
Setting labour cost		12.00	person			35,000			420,000	
Subtotal		1.00	LS						630,000	
Per Unit Price		1.00	LS				0.00	0.00	630,000	

00-　328　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_18-22m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	5 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.20	person	21,870.00			4,374.00			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.40	person	14,580.00			5,832.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.20	person	12,150.00			2,430.00			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.27	day	47,880.00		243,760	12,768.00		65,003	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.27	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		25,404.00	0.00	65,003	6,605.04	(0.00)	16,901	
*Cement material is counted in other sheet										
Subtotal		1.00	set				32,009.04		81,904	
Per Unit Price		1.00	set				32,009.04	0.00	81,904	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　329　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_15-18m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	6 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.17	person	21,870.00			3,645.00			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.33	person	14,580.00			4,860.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.17	person	12,150.00			2,025.00			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.22	day	47,880.00		243,760	10,640.00		54,169	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.22	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		21,170.00	0.00	54,169	5,504.20	(0.00)	14,084	
*Cement material is counted in other sheet										
Subtotal		1.00	set				26,674.20		68,253	
Per Unit Price		1.00	set				26,674.20	0.00	68,253	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　330　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_12-15m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	7 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.14	person	21,870.00			3,124.29			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.29	person	14,580.00			4,165.71			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.14	person	12,150.00			1,735.71			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.19	day	47,880.00		243,760	9,120.00		46,430	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.19	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		18,145.71	0.00	46,430	4,717.88	(0.00)	12,072	
*Cement material is counted in other sheet										
Subtotal		1.00	set				22,863.59		58,502	
Per Unit Price		1.00	set				22,863.59	0.00	58,502	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　331　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_7-9m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.10	person	21,870.00			2,187.00			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.20	person	14,580.00			2,916.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.10	person	12,150.00			1,215.00			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.13	day	47,880.00		243,760	6,384.00		32,501	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.13	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		12,702.00	0.00	32,501	3,302.52	(0.00)	8,450	
*Cement material is counted in other sheet										
Subtotal		1.00	set				16,004.52		40,951	
Per Unit Price		1.00	set				16,004.52	0.00	40,951	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　332　Productivity correction coefficient: Asia　Labour coefficient　none　Machine coefficient　General

Item: Deep mixing method　Reference　H28MLIT　65

Specification: 2 axis φ1200_6-7m　Quantity・Unit: 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	11 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.09	person	21,870.00			1,988.18			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.18	person	14,580.00			2,650.91			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.09	person	12,150.00			1,104.55			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.12	day	47,880.00		243,760	5,803.64		29,547	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.12	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		11,547.28	0.00	29,547	3,002.29	(0.00)	7,682	
*Cement material is counted in other sheet										
Subtotal		1.00	set				14,549.57		37,229	
Per Unit Price		1.00	set				14,549.57	0.00	37,229	

足場材賃料・設置/撤去/移設, 改良後の整地, 電力に関する経費

00-　　333　　Productivity correction coefficient: Asia　　Labour coefficient　none　　Machine coefficient　General

Item:　Deep mixing method　　Reference　H28MLIT　65

Specification:　2 axis φ1200_5-6m　　Quantity･Unit:　1　set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	12 nos / day									
Foreman	1 / daily productivity (nos/day) * 1	0.08	person	21,870.00			1,822.50			Lab-1
Skilled Labour	1 / daily productivity (nos/day) * 2	0.17	person	14,580.00			2,430.00			Lab-20
Unskilled Labour	1 / daily productivity (nos/day) * 1	0.08	person	12,150.00			1,012.50			Lab-21
Deep layer mixing machin 90kw_20m	1 / daily productivity (nos/day) / 0.75	0.11	day	47,880.00		243,760	5,320.00		27,084	OPE-81
Cement slurry plant 20m3/h	1 / daily productivity (nos/day) / 0.75	0.11	day	2,399.64		10,160				OPE-80
Miscellaneous cost	Subtotal×26%	0.26		10,585.00	0.00	27,084	2,752.10	(0.00)	7,042	
*Cement material is counted in other sheet										
Subtotal		1.00	set				13,337.10		34,126	
Per Unit Price		1.00	set				13,337.10	0.00	34,126	

足場材賃料･設置/撤去/移設, 改良後の整地, 電力に関する経費

00- 334 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Pavement Reference

Specification: on Steel deck Quantity・Unit: 8028 m2

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
A/C Binder Course		for Bridge using PMB Type Ⅲ (t=4cm)	8,028.00	m2	13,754		2,670	110,415,399		21,435,309	Qoatation
Preparation work(blasting, waterproof)			8,028.00	m2	41,558		8,068	333,628,845		64,768,480	Qoatation
A/C Surface Course		for Bridge using PMB Type Ⅱ (t=4cm)	8,028.00	m2	5,923		1,150	47,547,458		9,230,546	Qoatation
Tack coat			8,028.00	m2	901.44			7,236,779			Qoatation
a Binder											
Blasting	43206696	35%									
Waterproof	48970800	40%									
Binder	30506400	25%									
Temp.work	464374										
Shipping	*in shipping cost										
Total	123148270	15340 JPY/m2									
Foreign	86203789	10738 JPY/m2									
Local(30%)	36944481	4602 JPY/m2									
8028 m2											
b Surface											
Surface	12876912										
Temp.work	309583										
Shipping	*in shipping cost										
Total	13186495	1643 JPY/m2									
Foreign	9230546	1150 JPY/m2									
Local(30%)	3955948	493 JPY/m2									
8028 m2											
Subtotal			8,028.00	m2				498,828,480		95,434,335	
Per Unit Price			1.00	m2				62,136	0	11,888	

00- 335 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Pavement Reference

Specification: on concrete deck Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bridge Surface Works	Deck Waterproof Works	100.00	m2	969.57	0.00	2,138	96,957.00	0.00	213,750	01-292
Binder Course (Carriage / Bridge Section)	t=4cm	100.00	m2	8,650.07	0.00	0	865,007.00	0.00	0	01-290
Surface Course (Carriage)	t=4cm	100.00	m2	8,920.97	0.00	0	892,097.00	(0.00)	0	01-291
Subtotal		100.00	m2				1,854,061.00		213,750	
Per Unit Price		1.00	m2				18,540.61	0.00	2,138	

00- 336 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Ligjtning Foundation Reference

Specification: Cast in site_PKG1_Approach_Main Road Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	Class D	1.38	m3	99,456	0	0	137,250	0	0	00-51
Rebar work_SD345	Arranging D13	0.120	ton	126,764	0.0	78,422	15,212	0.00	9,411	00-79
Rebar work_SD345	Assembling D13	0.120	ton	154,137	0.0	0	18,496	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	6.04	m2	8,785	0	0	53,077	0	0	01-22
Subtotal		1.00	LS				224,035		9,411	
Per Unit Price		1.00	LS				224,035	0	9,411	

00- 337 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Ligjtning Foundation Reference

Specification: Cast in site_PKG1_Approach_Ramp Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	Class D	0.46	m3	99,456	0	0	45,750	0	0	00-51
Rebar work_SD345	Arranging D13	0.040	ton	126,764	0.0	78,422	5,071	0.00	3,137	00-79
Rebar work_SD345	Assembling D13	0.040	ton	154,137	0.0	0	6,165	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	2.01	m2	8,785	0	0	17,692	0	0	01-22
Subtotal		1.00	LS				74,678		3,137	
Per Unit Price		1.00	LS				74,678	0	3,137	

00- 338 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Ligjtning Foundation Reference

Specification: Cast in site_PKG2_Approach_Main Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	Class D	3.68	m3	99,456	0	0	365,999	0	0	00-51
Rebar work_SD345	Arranging D13	0.320	ton	126,764	0.0	78,422	40,564	0.00	25,095	00-79
Rebar work_SD345	Assembling D13	0.320	ton	154,137	0.0	0	49,324	0.00	0	00-82
Form work	for ordinal concrete_with&without rebar	16.11	m2	8,785	0	0	141,539	0	0	01-22
Subtotal		1.00	LS				597,427		25,095	
Per Unit Price		1.00	LS				597,427	0	25,095	

00- 339 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide(Design change) Reference H28MLIT P228

Specification: Guide(Frame)Install_L=26.5m_Driving10m_River_Vibratory Hammer Quantity・Unit: 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party		= 10 nos / 16 nos/day	0.625								
Foreman		1 person* daily productivity * 2.5 * party	3.125	person	21,870.00			68,343.75			Lab-1
Scaffolder		2 person* daily productivity * 2.5 * party	6.250	person	18,270.00			114,187.50			Lab-6
Unskilled Labour		1 person* daily productivity * 2.5 * party	3.125	person	12,150.00			37,968.75			Lab-21
350t CC			0.313	day	82,236.00	6,133.59		25,698.75	1,916.75		OPE-48
Vibratory Hammer224kW			0.313	day	204,309.00	864.29		63,846.56	(270.09)		OPE-59
4000t Barge			0.313	day	0.00	4,668.02	0	0.00	1,458.76	0	Mac-d(17)
275t CC			0.313	day	70,476.00	4,793.48		22,023.75	1,497.96		OPE-47
Vibratory Hammer224kW			0.313	day	0.00	864.29		0.00	(270.09)		OPE-59
3000t Barge			0.313	day	0.00	3,646.89	0	0.00	1,139.65	0	Mac-d(18)
Tag boat	3000PS_330GT	1*0.625	0.625	day	4,210,954.43			2,631,846.52			OPE-62
Transportation	300t(105 nos/time)	1*0.625		day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day		day							OPE-68
Miscellaneous cost		2%	0.02		2,963,915.58	6,553.30	0	59,278.31	131.07	0	
Material	L=20m(1.86nos/t)	H-300×300×10×15	18.566	t	0.00	0.00	64,800	0.00	0.00	1,203,077	Mat-176
Depreciation			(0.70)		0.00	0.00	1,203,077	0.00	0.00	-842,154	
Subtotal			10.00	nos				3,023,193.89	6,684.37	360,923	
Per Unit Price			1.00	nos				302,319	668.44	36,092	

00- 340 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide(Design change) Reference H28MLIT P269

Specification: Guide(Frame)Falswork_Install Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
2 party										
Foreman	1.7 person* 2.5 * party	8.5	person	21,870.00			185,895.00			Lab-1
Scaffolder	3.2 person* 2.5 * party	16.0	person	18,270.00			292,320.00			Lab-6
Unskilled Labour	1.7 person* 2.5 * party	8.5	person	12,150.00			103,275.00			Lab-21
Welder	1.7 person* 2.5 * party	8.5	person	19,440.00			165,240.00			Lab-17
Miscellaneous cost	LabourSubtotal x 4%	0.04	-	746,730.00		0	29,869.20		0	
350t CC		1.000	day	0.00	6,133.59	0	0.00	(6,133.59)	0	Mac-d(16)
4000t Barge		1.000	day	0.00	4,668.02	0	0.00	(4,668.02)	0	Mac-d(17)
275t CC		1.000	day	0.00	4,793.48	0	0.00	(4,793.48)	0	Mac-d(15)
3000t Barge		1.000	day	0.00	3,646.89	0	0.00	(3,646.89)	0	Mac-d(18)
Transportation 300 ton			day	counted depending on duration on "General temp. work cost"						Mac-d(22)
Tag boat 350PS_30GT	0.033 day		day							Mac-d(42)
Guide frame_Scaffolding	3 spans Steel box girder const. from Barge(Design chan	10.000	t	0.00	0.00	65,785	0.00	0.00	657,850	02-269
Depreciation		(0.70)		0.00	0.00	657,850	0.00	0.00	-460,495	
Subtotal		10.00	t				776,599.20	19,241.98	197,355	
Per Unit Price		1.00	t				77,659.92	1,924.20	19,736	

00-　341　　Productivity correction coefficient: Asia　　Labour coefficient　　Machine coefficient

Item: Steel Pipe Sheet Pile Driving(Design change)　　Reference

Specification: Steel Box(350 t CC & 275 t CC)　　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	Steel Box(Exterior)	32.0	nos	971,180	25,538	0	31,077,758	817,201	0	01-15
Steel Pipe driving_(Driving Length48-64m)_φ1200	Steel Box(Bulkhead)	4.0	nos	982,450	27,800	0	3,929,800	111,202	0	01-27
Transportation barge 1200t(10 nos/time)	30 days * 2.5 months = 75 days	75.0	days	2,498,798	0	0	187,409,856	0	0	Mac-d(10)
Tag boat 1000PS_90GT			days	counted depending on duration on "General temp. work cost"						
*Depreciation base cost counted acoording to construction schedule										
Subtotal		1.00	LS				222,417,413	928,403		
Per Unit Price		1.00	LS				222,417,413	928,403	0	

00- 342 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Material cost_P7(Design change) Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	684.458	t		761.76			(521,392.73)		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)		t		248.58			(0.00)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)		t		165.69			(0.00)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	261.536	t		788.94			206,336.21		Mat-268
Φ1,200	SKY490_t=14		t		850.32					Mat-269
Φ1,200	SKY490_t=16		t		877.50			(0.00)		Mat-270
φ=165.2, t =11mm, STK400		185.292	t		1,648.53			305,459.42		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	2.880	ton		3,431.25			(9,882.00)		Mat-272
(2) Welding Material	PL T=14 mm	0.432	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	1.296	ton		3,223.53			4,177.69		Mat-275
(4) Welded End Plate	PL T=12 mm	74	no		12.42			919.08		Mat-276
(5) Nonweld Interlocking Range		74	no		135.00			9,990.00		Mat-277
Depreciation	10%	(0.10)		0.00	1,058,157.13	0.00	0	(105,816)	0	
Subtotal		1.00	LS					952,341.42		
Per Unit Price		1.00	LS				0.00	952,341.42	0	

00- 343 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_(Design change) Reference H28MLIT P228

Specification: Guide(Frame)Install_L=36.5m_Driving10m_River_Vibratory Hammer_from Jetty_P6 Quantity・Unit: 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party	= 10 nos / 16 nos/day	0.625								
Foreman	1 person* daily productivity * 2.5 * party	1.563	person	21,870.00			34,171.88			Lab-1
Scaffolder	2 person* daily productivity * 2.5 * party	3.125	person	18,270.00			57,093.75			Lab-6
Unskilled Labour	1 person* daily productivity * 2.5 * party	1.563	person	12,150.00			18,984.38			Lab-21
Crawler crane	200t hang	0.625	day	2,814,362.92			1,758,976.83			OPE-46
Vibratory Hammer224kW		0.625	day	204,309.00	864.29		127,693.13	(540.18)		OPE-59
Miscellaneous cost	2%	0.02		1,996,919.97	540.18	0	39,938.40	10.80	0	
Material L=36.5m(3.39t/nos)	H-300×300×10×15	33.900	t	0.00	0.00	64,800	0.00	0.00	2,196,720	Mat-176
Depreciation		(0.70)		0.00	0.00	2,196,720	0.00	0.00	-1,537,704	
Subtotal		10.00	nos				2,036,858.37	550.98	659,016	
Per Unit Price		1.00	nos				203,686	55.10	65,902	

00- 344 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Guide_(Design change) Reference H28MLIT P269

Specification: Guide(Frame)Falswork_Install_from Jetty_P6 Quantity･Unit: 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party										
Foreman	1.7 person* 2.5 * party	4.25	person	21,870			92,948			Lab-1
Scaffolder	3.2 person* 2.5 * party	8.00	person	18,270			146,160			Lab-6
Unskilled Labour	1.7 person* 2.5 * party	4.25	person	12,150			51,638			Lab-21
Welder	1.7 person* 2.5 * party	4.25	person	19,440			82,620			Lab-17
Miscellaneous cost	Labour costSubtotal x 4%	0.04	-	373,365		0	14,935		0	
Crawler crane	200t hang	1.000	day	2,814,363			2,814,363			OPE-46
Guide frame_Scaffolding	PKG2_P21_22(1nos)	10.000	t	0.00	0.00	65,785	0.00	0.00	657,850	02-269
Depreciation		(0.70)		0	0	657,850	0	0	-460,495	
Subtotal		10.00	t				3,202,663		197,355	
Per Unit Price		1.00	t				320,266	0	19,736	

00- 345 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Steel Pipe Sheet Pile Driving_(Design change) Reference

Specification: from Jetty_P6 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P21_22(Exterior)_from Jetty	34.0	nos	6,154,215	2,915	0	209,243,312	99,124	0	01-268
Steel Pipe driving_(Driving Length48-64m)_φ1200	PKG2_P21_22(Bulkhead)_from Jetty		nos	6,154,215	2,915	0	0	0	0	01-269
* Transportation of steel pipe sheet pile is included on barge section "00-284"										
Subtotal		1.00	LS				209,243,312	99,124		
Per Unit Price		1.00	LS				209,243,312	99,124	0	

00- 346 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Material cost_from Jetty_P6(Design change) Reference

Specification: Steel Pipe Sheet Pile Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Φ1,200	SKY400_t=14	583.389	t		761.76			(444,402.40)		Mat-264
Φ1,200(Additional cost for short length)	SKY400_t=14(2m)		t		248.58			(0.00)		Mat-265
Φ1,200(Additional cost for short length)	SKY400_t=14(3m)		t		165.69			(0.00)		Mat-266
Φ1,200(Additional cost for short length)	SKY400_t=14(4m)		t		124.29			(0.00)		Mat-267
Φ1,200	SKY400_t=16	190.536	t		788.94			150,321.47		Mat-268
Φ1,200	SKY490_t=14		t		850.32					Mat-269
Φ1,200	SKY490_t=16		t		877.50			(0.00)		Mat-270
φ=165.2, t =11mm, STK400		163.200	t		1,648.53			269,040.10		Mat-271
Accessories										
(1) Reinforcement Band	PL T=9 mm	2.720	ton		3,431.25			(9,333.00)		Mat-272
(2) Welding Material	PL T=14 mm	0.408	ton		0.00			(0.00)		Mat-273
	PL T=16 mm		ton		0.00			0.00		Mat-274
(3) Pad eyes	PL T=22 mm	1.224	ton		3,223.53			3,945.60		Mat-275
(4) Welded End Plate	PL T=12 mm	68	no		12.42			844.56		Mat-276
(5) Nonweld Interlocking Range		68	no		135.00			9,180.00		Mat-277
Depreciation	10%	(0.10)		0.00	887,067.13	0	0	(88,707)	0	
Subtotal		1.00	LS					798,360.42		
Per Unit Price		1.00	LS				0.00	798,360.42	0	

00- 347 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Bracket support_PKG1(Design change) Reference H28MLIT 825

Specification: Pierhead_coping Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bracket type support		61.98	t	1,278,892	0	0	79,265,740	0	0	01-177
Support for overhang section		1,350	m3	37,018	0	0	49,973,787	0	0	01-178
Material for Bracket support	P6,7	1.00	LS	65,254,410	0	0	65,254,410	0	0	02-280
Subtotal		1.00	LS				194,493,937			
Per Unit Price		1.00	LS				194,493,937	0	0	

00- 348 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Steel girder fabrication Reference

Specification: 3 spans Steel box girder (Design change) Quantity･Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Direct cost	各代価をコスト縮減策にならい、修正すること									
Material cost										
Material cost (Steel Plate)		1.00	LS	0	0	1,247,206,070	0	0	1,247,206,070	01-294
Material cost (Shapes)		1.00	LS	0	0	292,702,237	0	0	292,702,237	01-295
Material cost (HTB)		1.00	LS	0	0	32,062,074	0	0	32,062,074	01-296
Fabrication cost										
Fabrication cost of direct labour cost		1.00	LS	0	0	628,598,393	0	0	628,598,393	01-297
Painting in factory										
Blasting in factory			m2	0	0	2,338	0	0	0	01-49
Paint labour cost	C-5	46,767	m2	0	0	2,037	0	0	95,263,768	01-50
Paint labour cost	D-5	70,300	m2	0	0	1,304	0	0	91,648,704	01-53
Paint Material cost	C-5	46,767	m2	0	0	2,418	0	0	113,089,363	01-51
Paint Material cost	D-5	70,300	m2	0	0	943	0	0	66,295,712	01-52
In-Organic Zinc Rich Paint	On Steel Deck	17,500	m2	0	0	1,157	0	0	20,239,975	01-58
(Total paint material cost)		1	LS	0	0	179,385,075	0	0	179,385,075	
Indirect cost										
Indirect cost of fabrication	Direct cost * 37.6%	0.376		0	0	628,598,393	0	0	236,352,996	
Administration fee	Direct cost(without material cost)&indirect cost*28.8%	0.288		0	0	1,072,103,836	0	0	308,765,905	
Subtotal		1.00	L.S.						3132225197	
Per Unit Price		1.00	L.S.				0	0	3,132,225,197	

00- 349 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Erection of girder(P5-6) Reference

Specification: 3 spans Steel box girder (Design change) Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bent foundation (on land)	Concrete foundation_3 spans Steel box girder (Design ch	48	m3	103,988	0	0	4,991,424		0	01-298
Bent equipment instllation and demolition (on land)	3 spans Steel box girder (Design change)	1	LS	120,773,601	0	0	120,773,601		0	01-299
Fall prevention / protection and Ascending ladder	3 spans Steel box girder (Design change)	1.00	LS	0	0	4,560,880	0	0.00	4,560,880	01-300
Reassembling in site	3 spans Steel box girder (Design change)	1,058	t	67,199	0	0	71,091,379	0.00	0	01-301
Girder erection(P5-6)	3 spans Steel box girder (Design change)	1,058	t	38,059	0.00	0	40,263,362	(0.00)	0	01-302
＊Temp. Bent in river was calculated in 01-350										
Subtotal		1.00	L.S.				237,119,766		4,560,880	
Per Unit Price		1.00	L.S.				237,119,766	0.00	4,560,880	

00- 350 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Erection of main girder(P6-7,7-8) Reference

Specification: 3 spans Steel box girder (Design change) Quantity・Unit: 1 L.S.

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bent instllation and removal	3 spans Steel box girder (Design change)(P6-7,7-8)	1.00	LS	419,135,079	46,875.84	70,923,287	419,135,079	46,875.84	70,923,287	01-304
Scaffolding	3 spans Steel box girder (Design change)(P6-7,7-8)	1.00	LS	0	0.00	43,997,622	0	0.00	43,997,622	01-305
Fall prevention / protection and Ascending ladder	3 spans Steel box girder (Design change)(P6-7,7-8)	1.00	LS	0	0.00	8,072,300	0	0.00	8,072,300	01-306
Reassembling(P6-7,7-8)	in construction yard	2,372	t	66,508	0.00	0	157,762,064	0.00	0	01-307
Girder erection(P6-7,7-8)	275tCC mounted on 3,000t barge	2,372	t	6,511	79.33	0	15,445,665	(188,176.63)	0	01-308
Subtotal		1.00	L.S.				592,342,808	235,052.47	122,993,209	
Per Unit Price		1.00	L.S.				592,342,808	235,052.47	122,993,209	

00- 351 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Painting in site Reference

Specification: 3 spans Steel box girder (Design change) Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint in site	F-11 (Exterior)	2,549.80	m2	6,179	0	2,150	15,754,041	0	5,482,325	01-122
Paint in site	F-12 (Interior)	9,239.21	m2	5,631	0	1,253	52,024,051	0	11,577,469	01-123
Paint in site	F-13 (Exterior)	0.00	m2	7,274	0	3,943	0	0	0	01-124
Paint in site	F-14 (Interior)	0.00	m2	5,083	0	2,099	0	0	0	01-125
Painting in site	In-Organic Zinc Rich Paint		m2	5,083	0	741	0	0	0	01-126
Subtotal		1.00	LS				67,778,093		17,059,794	
Per Unit Price		1.00	LS				67,778,093	0	17,059,794	

00-　352　Productivity correction coefficient: Asia　Labour coefficient　Machine coefficient

Item: Bearing setting　Reference

Specification: 3 spans Steel box girder (Design change)　Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Rubber Bearing										
Rubber Bearing	Normal type(Steel Girder)		nos							01-128
Rubber Bearing	Separat perform type(Steel Girder)	16.00	nos	954,335	0	0	15,269,352	0	0	01-129
Bearing for Steel box girder	for P5	4	nos	0	71,006	0	0	284,025	0	Mat-461
	for P6	4	nos	0	66,524	0	0	266,096	0	Mat-462
	for P7	4	nos	0	70,981	0	0	283,923	0	Mat-463
	for P10	4	nos	0	67,266	0	0	269,066	0	Mat-464
Subtotal		1.00	LS				15,269,352	1,103,110		
Per Unit Price		1.00	LS				15,269,352	1,103,110	0	

00- 353 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item: Expaansion Joint setting Reference

Specification: 3 spans Steel box girder (Design change) Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Modular type	P5	27.20	m	145,941.23	0.00	1,231,029	3,969,601	0	33,483,992	01-311
Subtotal		1.00	LS				3,969,601.46		33,483,992	
Per Unit Price		1.00	LS				3,969,601.46	0.00	33,483,992	

00- 354 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Wheel Guard & Median Strip Reference

Specification: Cast in site for 3 spans Steel box girder (Design change) Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concreting_on_river	**Class D**	**263.64**	**m3**	105,754	0	0	**27,881,078**	**0**	**0**	**01-266**
Rebar work_SD345	Arranging D16-D25	18.159	ton	114,348	0	81,271	2,076,456	0	1,475,813	00-80
Rebar work_SD345	Assembling D16-D25	18.159	ton	128,135	0	0	2,326,816	0	0	00-83
Form work	for ordinal concrete_with&without rebar	661.58	m2	8,785	0	0	5,811,804	0	0	01-22
EPS		15.64	m3	0	0	19,530	0	0	305,507	Mat-444
Subtotal		1.00	LS				38,096,154		1,781,320	
Per Unit Price		1.00	LS				38,096,154	0	1,781,320	

00- 355 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Accessory&Miscellaneous work Reference

Specification: 3 spans Steel box girder (Design change) Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Inspection way	3 spans Steel box girder (Design change)	1.00	LS	0	0	4,086,811	0	0	4,086,811	01-309
Water pipe support	3 spans Steel box girder (Design change)	1.00	LS	0	0	633,881	0	0	633,881	01-310
Subtotal		1.00	LS						4,720,692	
Per Unit Price		1.00	LS				0	0	4,720,692	

00- 356 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Fabrication Reference JST

Specification: Inspection Ladder for P5, 20 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		13.01	nos			26,900			349,915	
G	1.36ton									
g	9.6person/ton									
a	0									
L	SS400_50*50*6	0.04	ton	0.00	0.00	63,900.00	0.00	(0.00)	2,364.30	Mat-193
L	SS400_65*65*6	0.077	ton	0.00	0.00	63,900	0.00	(0.00)	4,920.30	Mat-194
FB	SS400_65*1270*6	0.041	ton	0.00	0.00	79,200	0.00	(0.00)	3,247.20	Mat-199
RB	φ22	0.018	ton	0.00	0.00	80,100.00	0.00	(0.00)	1,441.80	Mat-237
C	C-150x75x6.5x10	0.128	ton	0.00	0.00	63,900.00	0.00	(0.00)	8,179.20	Mat-206
PL	6.0<=t<=70mm	0.11	ton	0.00	0.00	79,200.00	0.00	(0.00)	8,870.40	Mat-198
H	300 x 300 x 10/15	0.824	ton	0.00	0.00	64,800.00	0	0	53,395	Mat-176
CH PL	560*3.2	0.094	ton			83,000			7,802.00	
PIPE		0.02	ton	0	0	99,900	0	0	2,398	Mat-255
BN		74.00	nos	472.72	0.00	0.00	34,981.28	(0.00)	0.00	Mat-457
U bolt		22.00	nos	400.24	0.00	0.00	8,805.28	(0.00)	0.00	Mat-452
Concrete anchor		20.00	nos	713.94	0.00	0.00	14,278.80	(0.00)	0.00	Mat-456
Hot-Dip Galvanization	HDZ55	1.36	t			55,800			75,609	Mat-415
Subtotal		1.00	LS				58,065		518,142	
Per Unit Price		1.00	LS				58,065	0	518,142	

00- 357 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Fabrication Reference JST

Specification: Inspection Ladder for P10, 13 Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		12.53	nos			26,900			337,003	
G	1.31ton									
g	9.6person/ton									
a	0									
L	SS400_50*50*6	0.11	ton	0.00	0.00	63,900.00	0.00	(0.00)	7,284.60	Mat-193
										Mat-194
FB	SS400_65*1270*6	0.041	ton	0.00	0.00	79,200	0.00	(0.00)	3,247.20	Mat-199
RB	φ22	0.018	ton	0.00	0.00	80,100.00	0.00	(0.00)	1,441.80	Mat-237
C	C-150x75x6.5x10	0.117	ton	0.00	0.00	63,900.00	0.00	(0.00)	7,476.30	Mat-206
PL	6.0<=t<=70mm	0.12	ton	0.00	0.00	79,200.00	0.00	(0.00)	9,108.00	Mat-198
H	300 x 300 x 10/15	0.795	ton	0.00	0.00	64,800.00	0	0	51,516	Mat-176
CH PL	560*3.2	0.083	ton			83,000			6,889.00	
PIPE		0.02	ton	0	0	99,900	0	0	2,198	Mat-255
BN		86.00	nos	472.72	0.00	0.00	40,653.92	(0.00)	0.00	Mat-457
U bolt		22.00	nos	400.24	0.00	0.00	8,805.28	(0.00)	0.00	Mat-452
Concrete anchor		20.00	nos	713.94	0.00	0.00	14,278.80	(0.00)	0.00	Mat-456
Hot-Dip Galvanization	HDZ55	1.31	t			55,800			72,819	Mat-415
Subtotal		1.00	LS				63,738		498,983	
Per Unit Price		1.00	LS				63,738	0	498,983	

00- 358 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Installation Reference JICA study team

Specification : Inspection Ladder Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.00	person	44,100			44,100			Lab-2
Skilled Labour for Bridges		4.00	person	29,400			117,601			Lab-8
Unskilled Labour		8.00	person	12,150			97,200			Lab-21
Rough terrain crane	25t hang	2.00	day	297,147	0		594,294	0		OPE-27
Miscellaneous cost	10%	0.10		258,901	0	0	25,890	0	0	
Subtotal		1.00	set				879,086			
Per Unit Price		1.00	set				879,086	0	0	

01-	1	Productivity correction coefficient: Asia	Labour coefficient	Simple		Machine coefficient	none		
Item :	Curing				Reference		H24MLIT P289		
Specification :	Ordinal curing (Plain concrete)				Quantity・Unit :		10	m3	

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.30 (person) ×1.5	0.45	person	12,150.00			5,467.50			Lab-21
Miscellaneous cost	Labour cost×17%	0.17	set	5,467.50			929.48			
Miscellaneous cost is for expense of sprinkling water, electricity, other materials										
Subtotal		10.00	m3				6,397			
Per Unit Price		1.00	m3				640	0	0	

01- 2

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Curing

Reference H15MLIT P273

Specification : Ordinal curing (Reinforced concrete)

Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	0.16 (person) ×1.5	0.24	person	12,150.00			2,916.00			Lab-21
Miscellaneous cost	Labour cost×33%	0.33	set	2,916.00			962.28			
Miscellaneous cost is for expense of sprinkling water, electricity, other materials										
Subtotal		10.00	m3				3,878			
Per Unit Price		1.00	m3				388	0	0	

01- 4

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Installation of pipe culvert

Reference H25工歩 P246

Specification : Pipe culvert 1,500mm

Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.7(person)×1.5	1.05	人	21,870.00			22,963.50			Lab-1
Skilled Labour	0.3(person)×1.5	0.45	人	14,580.00			6,561.00			Lab-20
Unskilled Labour	1.4(person)×1.5	2.10	人	12,150.00			25,515.00			Lab-21
Rough terrain crane	25t hang	0.50	日	232,008.00			116,004.00			OPE-27
Miscellaneous cost	Subtotal(Labour cost, machine expense) x 30%	0.30	-	171,043.50		0	51,313.05		0	
This breakdown includes shipping in insite(30m)										
Subtotal		10.00	m				222,357			
Per Unit Price		1.00	m				22,236	0	0	

01- 5

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Remove of pipe culvert

Reference H25工歩 P246

Specification : Pipe culvert 1,500mm

Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.7(person)×1.5	1.05	person	21,870.00			22,963.50			Lab-1
Skilled Labour	0.3(person)×1.5	0.45	person	14,580.00			6,561.00			Lab-20
Unskilled Labour	1.4(person)×1.5	2.10	person	12,150.00			25,515.00			Lab-21
Rough terrain crane	25t hang	0.50	day	232,008.00			116,004.00			OPE-27
Miscellaneous cost	Subtotal(Labour cost, machine expense) x 30%	0.30	-	171,043.50		0	51,313.05		0	
This breakdown includes shipping in insite(30m)										
Subtotal		10.00	m				222,357			
Per Unit Price		1.00	m				22,236	0	0	

01- 13 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Remove of pipe culvert Reference H24MLIT P124

Specification : φ=600mm Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.4 (person) ×1.5	0.60	person	21,870.00			13,122.00			Lab-1
Skilled Labour	0.2 (person) ×1.5	0.30	person	14,580.00			4,374.00			Lab-20
Unskilled Labour	0.7 (person) ×1.5	1	person	12,150.00			12,757.50			Lab-21
Backhoe	Crawler typeFull bucket0.6m3	3.10	hr	48,496.82			150,340.13			OPE-36
Miscellaneous cost	Subtotal of Labour cost, machine operationcost ×31%	0.31	-	180,593.63			55,984.03			
This breakdown includes shipping in insite(30m)										
10m requires Backhoe operation duration=3.10 (hr)										
Subtotal		10.00	m				236,578			
Per Unit Price		1.00	m				23,658	0	0	

01- 14 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item : 土工 Tamper Reference H24MLIT 22

Specification : 埋戻工Unit Priceに使用 Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Unskilled Labour	3 (person)	3.00	person	12,150.00			36,450.00			Lab-21
Machine										
Vibration Roller	3/0.85 (日)	3.53	day	61,020.40	0.00		215,366.12		984	OPE-21
Subtotal		100.00	m3				251,816		984	
Per Unit Price		1.00	m3				2,518	0	10	

01- 15 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200 Reference H28MLIT 197

Specification : Cable stayed bridge(Exterior) Quantity・Unit : 20 nos

Item		Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
2 party											
a= 1.00	b= 1.15	Ta = 12.5	19.167	day/20nos	(Daily productivity * 75%)						
Foreman		1 person* total days * party	38.333	person	21,870			838,350			Lab-1
Scaffolder		2 person* total days * party	76.667	person	18,270			1,400,700			Lab-6
Unskilled Labour		1 person* total days * party	38.333	person	12,150			465,750			Lab-21
Welder		2 person* total days * party	76.667	person	19,440			1,490,400			Lab-17
350t CC			19.167	day	82,236	6,134		1,576,190	117,560		OPE-48
Vibratory hanmmer		240kw	19.167	day	204,309	864		3,915,923	16,566		OPE-59
Hydraulic hammer		S200	19.167	day	127,323	5,677		2,440,358	108,815		OPE-61
4000t Barge			19.167	day	0	4,668	0	0	89,470	0	Mac-d(17)
275t CC			19.167	day	70,476	4,793		1,350,790	91,875		OPE-47
Vibratory hanmmer		240kw	19.167	day	204,309	864		3,915,923	16,566		OPE-59
3000t Barge			19.167	day	0	3,647	0	0	69,899	0	Mac-d(18)
Tag boat	3000PS_330GT	0.346 hr/day / (8 hr/day) * 2 time	0.173	day	4,210,954			728,704			OPE-62
Transportation barge	1200t(10 nos/time)	2 nos	counted depending on duration on "00-59"								Mac-d(10)
Tag boat	1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time									OPE-65
Transportation barge	300t(10 nos/2 time)	2 nos									Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time									OPE-68
Miscellaneous cost		31%	0.31		4,195,200	0	0	1,300,512	0	0	
Subtotal			20.00	nos				19,423,599	510,751		
Per Unit Price			1.00	nos				971,180	25,538	0	

01- 16 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Installation of name plate Reference H25MLIT 982

Specification : Name plate Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Unskilled Labour	0.14x1.5/1 (person)	0.21	person	12,150.00			2,551.50			Lab-21
Machine										
Material	Bronze									
Name plate	Bronzed 600mm x 300mm x 10mm	1.00	nos			0			0	Mat-115
		0.00	0							
Subtotal		1.00	nos				2,552			
Per Unit Price		1.00	nos				2,552	0	0	

01-	17	Productivity correction coefficient: Asia	Labour coefficient	none	Machine coefficient	Simple

Item : Levelling & compacting soil — Reference : H24MLIT P38

Specification : for Embankment/Filled up/Foundation, W<1.0m,Borrow material — Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Vibration Roller	・Hand Guide0.8-1.1t 1.43/95%	1.50	day	61,020.40			91,760.00			OPE-21
Material for leveling	Crush stone	133	m3	0.00			0.00			Mat-47
100m3 requires actual amount of soil =Leveled and Conpacted amount(m3) /Volume change rate(C/L)=100/(0.9/1.2)=133 (m3)										
Daily productivity=70m3/day										
100m3 required work days=100 (m3) /Daily productivity (m3/day) =100/70=1.43 (日)										
Subtotal		100.00	m3				91,760			
Per Unit Price		1.00	m3				918	0	0	

01-	18	Productivity correction coefficient: Asia	Labour coefficient	Simple	Machine coefficient	none

Item : Backfilling (crush stone) Reference H24MLIT P67

Specification : Crush stone Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.7x10/38 (m3/day)	0.18	person	21,870.00			4,028.68			Lab-1
Skilled Labour	1.3x10/38 (m3/day)	0.34	person	14,580.00			4,987.89			Lab-20
Unskilled Labour	3.3x10/38 (m3/day)	0.87	person	12,150.00			10,551.32			Lab-21
Crushed stone	13x(1+0.20)	16.00	m3	41,850.00			669,600.00			Mat-45
Backhoe	Crawler type Full bucket0.6m3 1x10/38 (m3/day)	0.26	day	304,207.27			80,054.55			OPE-13
Miscellaneous cost	Subtotal(Labour cost,expense of machine operation) x	0.007	-	99,622.44		0	697.36		0	
10m3 requires actual amount of soil =Leveled and Conpacted amount(m3) /Volume change rate of gravel (C/L)=100/(0.9/1.2)=13 (m3)										
Daily productivity=38m3/day										
10m3 required work days=10 (m3) /Daily productivity (m3/day) =10/38=0.26 (日)										
Miscellaneous cost is for depreciation and operation cost of machine										
Subtotal		10.00	m3				769,920			
Per Unit Price		1.00	m3				76,992	0	0	

01- 21

Productivity correction coefficient: Asia

Labour coefficient: Simple

Machine coefficient: none

Item : Crush stone base work

Reference: H24MLIT P67

Specification : Crush stone,t=15cm

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.6×100/D (person) x1.5	0.58	person	21,870.00			12,698.71			Lab-1
Skilled Labour	1.1×100/D (person) x1.5	1.06	person	14,580.00			15,520.65			Lab-20
Unskilled Labour	2.9×100/D (person) x1.5	3	person	12,150.00			34,098.39			Lab-21
Crush stone	Crushed stone	18.00	m3	0.00			0.00			Mat-47
Backhoe	・Crawler typeFull bucket0.6m3	0.65	day	304,207.27			196,262.76			OPE-13
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*0.7%	0.007	-	258,580.50			1,810.06			
100m2 requires agregate volume=100 (m2) ×0.15 (m) × (1+0.20) =18.0 (m3)										
Daily productivity=155 (m2/日)										
100m2 required work days=100 (m2) /Daily productivity (m2/日) =100/155=0.65 (日)										
Subtotal		100.00	m2				260,391			
Per Unit Price		1.00	m2				2,604	0	0	

01- 22 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Form work Reference H24MLIT P292

Specification : for ordinal concrete_with&without rebar Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	3.1 (person) ×1.5	4.65	person	21,870.00			101,695.50			Lab-1
Form work	15.7 (person) ×1.5	23.55	person	18,270.00			430,258.50			Lab-18
Unskilled Labour	10.0 (person) ×1.5	15.00	person	12,150.00			182,250.00			Lab-21
Miscellaneous cost	Subtotal×23%	0.23	-	714,204.00			164,266.92			
Miscellaneous cost is for form material, support, release agent and other tools										
Subtotal		100.00	m2				878,471			
Per Unit Price		1.00	m2				8,785	0	0	

01- 23 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Form work Reference H24MLIT P292

Specification : Ordinal form for minor structure Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	3.5 (person) ×1.5	5.25	person	21,870.00			114,817.50			Lab-1
Form work	13.5 (person) ×1.5	20.25	person	18,270.00			369,967.50			Lab-18
Unskilled Labour	11.1 (person) ×1.5	16.65	person	12,150.00			202,297.50			Lab-21
Miscellaneous cost	Subtotal×15%	0.15	-	687,082.50			103,062.38			
Miscellaneous cost is for form material, support, release agent and other tools										
Subtotal		100.00	m2				790,145			
Per Unit Price		1.00	m2				7,901	0	0	

01- 24 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Form work Reference H24MLIT P292

Specification : for level concrete Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Foreman	0.1 (person) ×1.5	0.15	person	21,870.00			3,280.50			Lab-1
Form work	1.0 (person) ×1.5	1.50	person	18,270.00			27,405.00			Lab-18
Unskilled Labour	0.4 (person) ×1.5	0.60	person	12,150.00			7,290.00			Lab-21
Miscellaneous cost	Subtotal×18%	0.18	-	37,975.50			6,835.59			
Miscellaneous cost is for form material, support, release agent and other tools										
Subtotal		100.00	m2				44,811			
Per Unit Price		1.00	m2				448	0	0	

01- 25

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Crush stone base work

Reference H24MLIT P67

Specification : Crush stone, t=15cm

Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.6×100/D (person) x1.5	0.58	person	21,870.00			12,698.71			Lab-1
Skilled Labour	1.1×100/D (person) x1.5	1.06	person	14,580.00			15,520.65			Lab-20
Unskilled Labour	2.9×100/D (person) x1.5	3	person	12,150.00			34,098.39			Lab-21
Crush stone	Crushed stone	18.00	m3	41,850.00	0.00	0	753,300.00	(0.00)	0.00	Mat-47
Backhoe	・Crawler typeFull bucket0.6m3	0.65	日	304,207.27			196,262.76			OPE-13
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*0.7%	0.007	-	258,580.50			1,810.06			
100m2 requires agregate volume=100 (m2) ×0.15 (m) × (1+0.20) =18.0 (m3)										
Daily productivity=155 (m2/日)										
100m2 required work days=100 (m2) /Daily productivity (m2/日) =100/155=0.65 (日)										
Subtotal		100.00	m3				1,013,691			
Per Unit Price		1.00	m3				10,137	0	0	

01- 26 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item : Scaffolding Reference H28MLIT P273

Specification : Scaffolding Install / Remove Hand rail precede type Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.4 (person) x 2.5	3.50	人	21,870.00			76,545.00			Lab-1
Scaffolder	6.3 (person) x 2.5	15.75	人	18,270.00			287,752.50			Lab-6
Unskilled Labour	1.2 (person) x 2.5	3.00	人	12,150.00			36,450.00			Lab-21
ラフテレーンクレーン運転　油圧伸縮ジブ型25t吊		1.40	日	232,008.00			324,811.20			OPE-27
Miscellaneous cost	Subtotal of Labour cost,Depreciation cost of machine x	0.34	-	725,558.70		0	246,689.96		0.00	
Subtotal		100.00	m2				972,249			
Per Unit Price		1.00	m2				9,722	0	0	

01- 27

Productivity correction coefficient: Asia

Labour coefficient none

Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200

Reference H28MLIT 197

Specification : Cable stayed bridge(Bulkhead)

Quantity・Unit : 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party											
a= 1.00	b= 1.15	Ta = 12.5	19.167	day/10nos	(Daily productivity * 75%)						
Foreman		1 person* total days * party	19.167	person	21,870.00			419,175.00			Lab-1
Scaffolder		2 person* total days * party	38.333	person	18,270.00			700,350.00			Lab-6
Unskilled Labour		1 person* total days * party	19.167	person	12,150.00			232,875.00			Lab-21
Welder		2 person* total days * party	38.333	person	19,440.00			745,200.00			Lab-17
350t CC			19.167	day	82,236	6,134		1,576,190	117,560		OPE-48
Vibratory hanmmer		240kw	19.167	day	204,309	864		3,915,923	16,566		OPE-59
Hydraulic hammer		S200	9.583	day	127,323	5,677		1,220,179	54,408		OPE-61
4000t Barge			19.167	day	0	4,668	0	0	89,470	0	Mac-d(17)
Tag boat	3000PS_330GT	0.346 hr/day / (8 hr/day) * 2 time	0.087	day	4,210,954.43			364,352.09			OPE-62
Transportation barge	1200t(10 nos/time)	1 nos									Mac-d(10)
Tag boat	1000PS_90GT	0.346 hr/day / (8 hr/day)									OPE-65
Transportation barge	300t(10 nos/2 time)	1 nos									Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day / (8 hr/day) * 2 time									OPE-68
Miscellaneous cost		31%	0.31		2,097,600.00	0.00	0	650,256.00	0.00	0	
Subtotal			10.00	nos				9,824,499	278,004		
Per Unit Price			1.00	nos				982,450	27,800	0	

counted depending on duration on "00-59"

01- 28 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item : Installation of cocrete pole Reference H28MLIT P925

Specification : Hight >=12m Quantity・Unit : 1 本

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Electrician	2.4(person) x 2.5	6.00	人	21,870.00			131,220.00			Lab-7
Unskilled Labour	4.0(person) x 2.5	10.00	人	12,150.00			121,500.00			Lab-21
Cocrete pole	L=12m	1	本			2,043			2,043.00	Mat-131
Subtotal		1.00	本				252,720		2,043	
Per Unit Price		1.00	本				252,720	0	2,043	

01- 33 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Crush stone base work Reference H24MLIT P67

Specification : Crush stone,t=20cm Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.6×100/D (person) x1.5	0.58	person	21,870.00			12,698.71			Lab-1
Skilled Labour	1.1×100/D (person) x1.5	1.06	person	14,580.00			15,520.65			Lab-20
Unskilled Labour	2.9×100/D (person) x1.5	3	person	12,150.00			34,098.39			Lab-21
Crush stone	Crushed stone	24.00	m3	0.00			0.00			Mat-47
Backhoe	Crawler typeFull bucket0.6m3	0.65	日	304,207.27			196,262.76			OPE-13
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*0.7%	0.007	-	258,580.51			1,810.06			
100m2 requires agregate volume=100 (m2) ×0.2 (m) × (1+0.20) =24.0 (m3)										
Daily productivity=155 (m2/日)										
100m2 required work days=100 (m2) /Daily productivity (m2/日) =100/155=0.65 (日)										
Subtotal		100.00	m2				260,391			
Per Unit Price		1.00	m2				2,604	0	0	

01- 34 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Fillter Material Installing Reference H25MLIT 89

Specification : 0.00 Quantity・Unit : 10 m3

名称	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (USD)	Foreign (USD)	Main (JPY)	Local (USD)	Foreign (USD)	Main (JPY)	
Foreman	0.3 person *1.5	0.45	person	21,870			9,842			
Skilled Labour	0.1 person *1.5	0.15	person	14,580			2,187			
Unskilled Labour	0.7 person *1.5	1	person	12,150			12,758			
Filter		10.00	m3	12,713	0	0	127,133	0	0	
Backhoe Operation	0.45m3	1.60	h	48,497	0		77,595	0		
Subtotal		10.00	m3				229,514			
Per Unit Price		1.00	m3				22,951	0	0	

01- 45

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

日本単価

Item : Plate

Reference

Specification : Tower(2 nos)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	Base Material *1.5 Quantity	682.088	t			115,000			78,440,120.00	Mat-140
Price extra	SS400	16.201	t			1,300			21,061.56	Mat-141
Price extra	SM400A_t<=38	3.199	t			3,500			11,197.55	Mat-142
Price extra	SM490YA_t<=25	52.433	t			13,000			681,630.30	Mat-143
Price extra	SM490YB_t<=25	87.745	t			16,000			1,403,920.00	Mat-144
Price extra	SM490YB_25<t<=38	213.672	t			19,000			4,059,773.70	Mat-145
Price extra	SM490YB_38<t<=50	308.837	t			22,000			6,794,416.20	Mat-146
Scrap	Heavy H1	477.462	t			21,500			(10,265,424.40)	Mat-147
	*Original weight	593.120	t							
Indirect matrial		593.120	t			12,000			7,117,440.00	Mat-139
Hot-Dip Galvanization	HDZ55	2.422	t			55,800			135,148	Mat-415
Subtotal		1.00	LS						88,399,283	
Per Unit Price		1.00	LS				0	0	88,399,283	

01- 46

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Shape

Reference

Specification : Tower(2 nos)

Quantity・Unit : 1 LS

Item	Specificatio *1.2 Quantity	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Shapes										
PLS	SUS304	0.019	t	548,398.35	0.00	0	10,529.25	(0.00)	0.00	Mat-148
FB	SM400A_75*12	0.014	t	0.00	0.00	82,350	0.00	(0.00)	1,185.84	Mat-149
FB	SS400	0.089	t	0.00	0.00	79,200	0.00	(0.00)	7,032.96	Mat-150
L	SS400	2.033	t	0.00	0.00	72,900	0.00	(0.00)	148,191.12	Mat-151
STK	STK400	3.216	t	0.00	0.00	99,900	0.00	(0.00)	321,278.40	Mat-152
SGP	20A	0.010	t	0.00	0.00	712,500	0.00	(0.00)	6,840.00	Mat-153
RB	SM400A_19φ	0.002	t	0.00	0.00	83,250	0.00	(0.00)	199.80	Mat-154
RB	SM400A_13φ	0.002	t	0.00	0.00	85,050	0.00	(0.00)	204.12	Mat-155
RB	SS400A_19φ	0.641	t	0.00	0.00	80,100	0.00	(0.00)	51,328.08	Mat-156
RB	SS400A_13φ	0.002	t	0.00	0.00	81,900	0.00	(0.00)	196.56	Mat-157
RB	SS400A_10φ	0.002	t	302,257.80	0.00	0	725.42	(0.00)	0.00	Mat-158
RB	SUS304_19φ	0.010	t	302,257.80	0.00	0	2,901.67	(0.00)	0.00	Mat-159
EXP	XS51_690	0.010	t	287,759.70	0.00	0	2,762.49	(0.00)	0.00	Mat-160
Scrap	Heavy H1	4.24	t			24,080			(101,985.54)	
Subtotal		1.00	LS				16,919		434,471	
Per Unit Price		1.00	LS				16,919	0	434,471	

01- 47

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : High strength bolt

Reference

Specification : Tower(2 nos)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
TCB	S10T_M22	7.666	t	249,196	0	0	1,910,238	0	0	Mat-161
BN	SS400_M10	0.103	t	334,298	0	0	34,500	0	0	Mat-162
TCB	S10T_M22*100	768.00	nos	0	0	138	0	0	106,099	Mat-224
TCB	S10T_M22*95	9,856.00	nos	0	0	135	0	0	1,326,125	Mat-223
Subtotal		1.00	LS				1,944,737		1,432,224	
Per Unit Price		1.00	LS				1,944,737	0	1,432,224	

01-	48	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Fabrication cost of direct labour cost　　Reference H28国基 PIV-7-1-1

Specification : Tower(2 nos)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
No of processing		5,323	nos			26,900			143,188,700.00	
Y={(Y1+Y2)*K+Y3+Y4}*(1+a)*(1+b)*(1+c)*(1+d)+Y5, (*round "No" off to two decimal places)										
(Y1) Total No. of process		4,321.17	nos							
(Y2) No. of welding		448.87	nos							
(Y3) No. of Pre-assembling in factory		552.83	nos							
Subtotal		1.00	LS						143,188,700	
Per Unit Price		1.00	LS				0	0	143,188,700	

01- 49

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Blasting

Reference H28国基 PIV-7-2-1

Specification :

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 6.3 person/100m2	6.30	person			29,100			183,330.00	Lab-50
Miscellaneous cost	9%	0.09				183,330			16,499.70	
Zinc rich primer		100.00	m2			340			34,000.00	
Subtotal		100.00	m2						233,830	
Per Unit Price		1.00	m2				0	0	2,338	

01- 50

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint labour cost

Reference H28国基 PIV-7-2-1

Specification : C-5

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 1.4 person/100m2 * 5 times	7.00	person			29,100			203,700.00	Lab-50
Subtotal		100.00	m2						203,700	
Per Unit Price		1.00	m2				0	0	2,037	

01- 51

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint Material cost

Reference H28国基 PIV-7-2-3

Specification : C-5

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint										
Zinc Rich Paint		60.00	kg			1,150			69,000.00	
Epoxy Resin Paint Primer		70.00	kg			1,010			70,700.00	
Fluorocarbon Resin Intermediate Paint		17.00	kg			1,080			18,360.00	
Fluorocarbon Resin Finish Paint		14.00	kg			3,850			53,900.00	
Modified Epoxy Resin Paint			kg							
Modified Epoxy Resin Paint			kg							
Ultra Thick Modified Epoxy Resin Paint			kg							
Thinner										
Zinc Rich Paint Thinner		6.00	kg			375			2,250.00	
Epoxy Resin Paint Primer Thinner		12.60	kg			355			4,473.00	
Fluorocarbon Resin Intermediate Paint Thinner		1.70	kg			355			603.50	
Fluorocarbon Resin Finish Paint Thinner		1.40	kg			390			546.00	
Modified Epoxy Resin Paint Thinner			kg							
Miscellaneous cost	10%	0.10		0.00	0.00	219,832.50	0.00	(0.00)	21,983.25	
Subtotal		100.00	m2						241,816	
Per Unit Price		1.00	m2				0	0	2,418	

01- 52 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Paint Material cost Reference H28国基 PIV-7-2-3

Specification : D-5 Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint										
Zinc Rich Paint			kg							
Epoxy Resin Paint Primer			kg							
Fluorocarbon Resin Intermediate Paint			kg							
Fluorocarbon Resin Finish Paint			kg							
Modified Epoxy Resin Paint		41.00	kg			1,010			41,410.00	
Modified Epoxy Resin Paint		41.00	kg			1,010			41,410.00	
Ultra Thick Modified Epoxy Resin Paint			kg							
Thinner										
Zinc Rich Paint Thinner			kg							
Epoxy Resin Paint Primer Thinner			kg							
Fluorocarbon Resin Intermediate Paint Thinner			kg							
Fluorocarbon Resin Finish Paint Thinner			kg							
Modified Epoxy Resin Paint Thinner		8.20	kg			355			2,911.00	
Miscellaneous cost	10%	0.10		0.00	0.00	85,731.00	0.00	(0.00)	8,573.10	
Subtotal		100.00	m2						94,304	
Per Unit Price		1.00	m2				0	0	943	

01- 53

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint labour cost

Reference H28国基 PIV-7-2-1

Specification : D-5

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 1.4 person/100m2 * 2 times * 1.6(inside)	4.48	person			29,100			130,368.00	Lab-50
Subtotal		100.00	m2						130,368	
Per Unit Price		1.00	m2				0	0	1,304	

01- 54

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Plate

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item	Specification	Q*1.15	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PL	SM570 16< t ≦40		8.340	t	0	0	183,730	0	0	1,532,268	Mat-316
PL	SM520C t=55		32.127	t	0	0	151,307	0	0	4,861,005	Mat-317
PL	SM520C t=65		8.554	t	0	0	156,813	0	0	1,341,334	Mat-318
PL	SM490YB t ≦25		147.315	t	0	0	140,570	0	0	20,708,084	Mat-319
PL	SM490YB 25 < t ≦38		185.727	t	0	0	138,172	0	0	25,662,238	Mat-320
PL	SM490YB 38 < t ≦50		27.713	t	0	0	141,103	0	0	3,910,342	Mat-321
PL	SM490YA t ≦25		2,008.230	t	0	0	136,573	0	0	274,270,404	Mat-322
PL	SM490C 50 < t ≦100		9.304	t	0	0	146,964	0	0	1,367,277	Mat-323
PL	SM400A t ≦38		2,402.058	t	0	0	122,720	0	0	294,779,344	Mat-324
PL	SS400		123.791	t	0	0	117,125	0	0	14,498,986	Mat-325
Scrap	Heavy H1		3,035.234	t			21,500			(65,257,537.45)	Mat-147
	*Original weight		4,336.049	t							
Indirect matrial			4,336.049	t			12,000			52,032,588.00	Mat-139
Hot-Dip Galvanization	HDZ55		59.79	t			55,800			3,336,115	Mat-415
Miscellaneous cost											
Subtotal			1.00	LS						633,042,449	
Per Unit Price			1.00	LS				0	0	633,042,449	

01- 55

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Shape

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item	Specification	Q*1.12	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
FB	SS400		8.380	t	0	0	139,276	0	0	1,167,110	Mat-326
L	SS400 12X150X150		16.173	t	0	0	134,150	0	0	2,169,588	Mat-327
L	SS400		10.703	t	0	0	125,783	0	0	1,346,221	Mat-328
CH	SS400 75X40X5X7		14.213	t	0	0	152,333	0	0	2,165,080	Mat-329
U	SM490YA 320X240X8		12.956	t	0	0	279,919	0	0	3,626,674	Mat-330
U	SM400A 320X240X8		531.241	t	0	0	281,453	0	0	149,519,484	Mat-331
STK	STK400 457.2X12.7		4.538	t	0	0	227,510	0	0	1,032,495	Mat-332
STK	STK400 355.6X7.9		1.438	t	0	0	227,510	0	0	327,178	Mat-333
PIPE	STK400 165.2X4.5		1.411	t	0	0	221,576	0	0	312,687	Mat-334
Round Bar	SS400		1.725	t	0	0	125,783	0	0	216,951	Mat-335
EXP	XG11 580		8.557	t	0	0	244,497	0	0	2,092,109	Mat-336
CHPL	SS400 450X3.2		0.018	t	0	0	164,203	0	0	2,943	Mat-337
H	SS400 300X150X11.5X22			t	0	0	144,419	0	0	0	Mat-338
H	SS400 100X100X6X8		1.505	t	0	0	148,377	0	0	223,348	Mat-339
RB	S35CN 110 ø		10.349	t	0	0	302,258	0	0	3,128,006	Mat-340
RB	S35CN 65 ø		5.499	t	0	0	302,258	0	0	1,662,176	Mat-341
BN	SS400 M10		1.852	t	0	0	334,298	0	0	619,280	Mat-346
BN	SUS304 M16		0.202	t	0	0	1,342,640	0	0	270,676	Mat-347
BOLT&NUT	S35CN M46		2.614	t	0	0	302,258	0	0	790,126	Mat-348
PLWS	SS400 210 ø X 108 ø others		2.177	t	0	0	302,258	0	0	658,100	Mat-349
Chain	SUS304 5X18X42X250		0.157	t	0	0	2,338,582	0	0	366,690	Mat-350
Scrap	Heavy H1		567.596	t			21,500			(12,203,314.00)	Mat-147
	*Original weight		567.596	t							
Indirect matrial			567.596	t			12,000			6,811,152.00	Mat-139
Subtotal			1.00	LS						166,304,760	
Per Unit Price			1.00	LS				0	0	166,304,760	

01- 56

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : High strength bolt

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
TCB		S10T M24	1.44	t	0	0	262,640	0	0	378,202	Mat-342
TCB		S10T M22	99.63	t	0	0	249,196	0	0	24,827,411	Mat-343
TCB		S10T M16	0.31	t	0	0	270,000	0	0	83,160	Mat-344
HTB		F10T M22	0.43	t	0	0	288,633	0	0	124,690	Mat-345
TCB	S10T	M24*135	1,568	nos	0			0			Mat-229
		M22*110	2,560	nos	0			0			Mat-228
		M22*95	6,048	nos	0			0			Mat-227
		M22*85	45,168	nos	0			0			Mat-226
		M22*80	1,248	nos	0			0			Mat-225
		M22*75	3,040	nos	0			0			Mat-224
		M22*70	64,880	nos	0			0			Mat-223
		M22*65	64,320	nos	0			0			Mat-222
		M16*85	1,232	nos	0			0			Mat-221
HTB	F10T	M22*80	80.00	nos							
		M22*75	768.00	nos							
Subtotal			1.00	LS						25,413,463	
Per Unit Price			1.00	LS				0	0	25,413,463	

01-	57	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Fabrication cost of direct labour cost　　Reference H28国基 PIV-7-1-1

Specification : Main girder　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
No of processing		85,261.73	nos			26,900			2,293,540,537	
Y={(Y1+Y2)*K+Y3+Y4}*(1+a)*(1+b)*(1+c)*(1+d)+Y5, (*round "No" off to two decimal places)										
(Y1) Total No. of process		78,561.30	nos							
(Y2) No. of welding		2,055.12	nos							
(Y3) No. of Pre-assembling in factory		4,625.16	nos							
Subtotal		1.00	LS						2,293,540,537	
Per Unit Price		1.00	LS				0	0	2,293,540,537	

01- 58 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : In-Organic Zinc Rich Paint Reference H28国基 PIV-7-1-1

Specification : On Steel Deck Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 1.4 person/100m2	1.40	person			29,100			40,740.00	Lab-50
Miscellaneous cost	9%	0.09				40,740			3,666.60	
Paint										
Zinc Rich Paint		60.00	kg			1,150			69,000.00	
Thinner										
Zinc Rich Paint Thinner		6.00	kg			375			2,250.00	
Subtotal		100.00	m2						115,657	
Per Unit Price		1.00	m2				0	0	1,157	

01-	64	Productivity correction coefficient: Asia	Labour coefficient	Technical	Machine coefficient	none

Item : Reassembling_in construction yard — Reference : H28MLIT PIV-7-1-1

Specification : 2 nos of tower — Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight / (0.5 * no of connection)		60.00	ton / day							
Foreman for Bridges	= 10ton / Daily Productivity * 1.0 person * 2.5	0.42	person	44,100.00			18,375.00			Lab-2
Skilled Labour for Bridges	= 10ton / Daily Productivity * 5.0 person * 2.5	2.08	person	29,400.30			61,250.63			Lab-8
Unskilled Labour	= 10ton / Daily Productivity * 1.0 person * 2.5	0.42	person	12,150.00			5,062.50			Lab-21
Miscellaneous cost	8%	0.08		84,688.13	0.00	0	6,775.05	(0.00)	0.00	
*Including scaffolding, safety net, temporary bolt, drift pin, other equipment.										
Rough Terrain Crane	70 t	0.167	day	399,481.60			66,580.27			OPE-73
Subtotal		10.00	t				158,043			
Per Unit Price		1.00	t				15,804	0	0	

01- 66 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Erection of tower Reference H28MLIT 880

Specification : Erection Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight of erection / (0.78 * no. of block + 1.8 * tower nos)		34.5	ton / day							
Foreman for Bridges	= (10 / 34.5) *1.0 person * 2.5 * 2party	1.45	person	44,100.00			63,913.04			Lab-2
Skilled Labour for Bridges	= (10 / 34.5) *5.0 person * 2.5 * 2party	7.25	person	29,400.30			213,045.65			Lab-8
Unskilled Labour	= (10 / 34.5) *1.0 person * 2.5 * 2party	1.45	person	12,150.00			17,608.70			Lab-21
Crawler crane *2nos	200t hang	0.580	day	2,814,362.92			1,631,514.74			OPE-46
Miscellaneous cost	8%	0.08		294,567.39	0.00	0.00	23,565.39	(0.00)	0.00	
Subtotal		10.00	t				1,949,648			
Per Unit Price		1.00	t				194,965	0	0	

01- 67 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Welding in site Reference H28MLIT 880

Specification : Tower(2nos) Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Actual length of welding(M) *a*b / (1.03 * Actual length of welding / 10 +12.6)		4.2	m / day							
Foreman for Bridges	= (10 / 4.2) * 1.0 person * 2.5 * 2party	11.90	person	44,100.00			525,000.00			Lab-2
Skilled Labour for Bridges	= (10 / 4.2) * 8.0 person * 2.5 * 2party	95.24	person	29,400.30			2,800,028.57			Lab-8
Miscellaneous cost	28%	0.28		3,325,028.57	0.00	0	931,008.00	(0.00)	0.00	
*including scaffolding, safety net, temporary bolt, drift pin, air compresser, erectric welder, CO2 automatic welder, Fire retardant sheet, erectricity, other cost										
Subtotal		10.00	m				4,256,037			
Per Unit Price		1.00	m				425,604	0	0	

01- 68 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Bracket support for scaffolding Reference H28MLIT 754

Specification : at tower bottom Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Daily productivity =Total weight of bent / (0.14 * Total weight of bent+1.0)		3.95	t							
Foreman for Bridges	= 1.0 person * 2.5 *2 day * 2party	10	person	44,100			441,000			Lab-2
Skilled Labour for Bridges	= 5.0 person * 2.5 *2 day * 2party	50	person	29,400			1,470,015			Lab-8
Unskilled Labour	= 1.0 person * 2.5 *2 day * 2party	10	person	12,150			121,500			Lab-21
Welder			person							
Miscellaneous cost	3%	0.03		2,032,515	0.00	0	60,975	(0.00)	0.00	
Bent equipment	8.85 t	2.00	set	0	0.00	573,459	0	(0.00)	1,146,917.50	02-238
Scafold for bent	3%	0.03		0	0.00	1,146,918	0	(0.00)	34,407.53	
Scrap	50%	(0.50)		0	0.00	1,146,918	0	(0.00)	(573,458.75)	
Crawler crane *2nos	200t hang	4.48	day	2,814,363			12,602,717			OPE-46
Subtotal		1.00	LS				14,696,208		607,866	
Per Unit Price		1.00	LS				14,696,208	0	607,866	

01- 69 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item: Scaffolding for Tower Reference H28MLIT P273

Specification: Hand rail precede type Quantity･Unit: 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.4person*1.5 * 2 party	4.20	person	21,870			91,854			Lab-1
Scaffolder	7.7person*1.5 * 2 party	23.10	person	18,270			422,037			Lab-6
Unskilled Labour	1.2person*1.5 * 2 party	3.60	person	12,150			43,740			Lab-21
Crawler crane *2nos	200t hang	2.800	day	2,814,362.92			7,880,216.18			OPE-46
Miscellaneous cost	31%	0.31		8,437,847	0	0	2,615,733	0	0	
*including scaffolding material cost										
Subtotal		100.00	m2				11,053,579.80			
Per Unit Price		1.00	m2				110,535.80	0.00	0	

01- 73 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Dead bolting Reference H28MLIT 880

Specification : Tower_Interior Quantity・Unit : 100 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Nos of TCB (T) / ((0.03 * Nos of TCB (T)+188)*0.01)		1,950	nos / day							
Foreman for Bridges	= (100 / 2100) * 1.0 person * 2.5	0.13	person	44,100.00			5,653.85			Lab-2
Skilled Labour for Bridges	= (100 / 2100) * 5.0 person * 2.5	0.64	person	29,400.30			18,846.35			Lab-8
Unskilled Labour	= (100 / 2100) * 1.0 person * 2.5	0.13	person	12,150.00			1,557.69			Lab-21
Miscellaneous cost	13%	0.13		26,057.89	0.00	0	3,387.53	(0.00)	0.00	
*including temporary erection bolt cost										
Torque share high tension bolt		100	nos	0.00	0.00	138	0.00	(0.00)	13,815.00	Mat-224
Working days	5.4 days									
Subtotal		100.00	nos				29,445		13,815	
Per Unit Price		1.00	nos				294	0	138	

01- 75 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Assembling&Disassembling_Weight below 300 t crawler crane Reference H28BE_ 39

Specification : 200 t CC on cable stayed bridge girder Quantity・Unit : 1 time

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour	20.5 person * 2.5	51.25	person	14,580.00			747,225.00			Lab-20
Crawler crane	350t hang	5.70	day	82,236.00	6,133.59		468,745.20	(34,961.46)		OPE-48
Barge	4000t	5.70	day	0.00	4,668.02	0	0.00	(26,607.73)	0.00	Mac-d(17)
Transportation_etc	287%	2.87		1,215,970.20	34,961.46	0	3,489,834.47	(100,339.40)	0.00	
*including round trip of transportation, lease fee during transportation and preparation, oil and other material										
Miscellaneous cost	16%	0.16		1,215,970.20	34,961.46	0	194,555.23	(5,593.83)	0.00	
*Lease fee during Assembly and disassembly , oil and other material										
Subtotal		1.00	time				4,900,360	167,502		
Per Unit Price		1.00	time				4,900,360	167,502	0	

01- 76 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Bent instllation and removal Reference

Specification : Cable stay bridge_Side span Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	549.672	t	448,742	0	0	246,661,072	0	0	00-24
Temporary Jetty	Remove superstructure	549.672	t	245,450	0	0	134,917,130	0	0	00-149
Steel Pipe driving_(Driving Length16-32m)_φ1200	for bent piles	192	nos	3,728,939	444	0	715,956,269	85,229	0	02-245
Demobilization	30%	0.3		715,956,269	85,229	0	214,786,881	25,569	0	
Bent equipment except for piles_PKG1	Material	1	LS	0	0	70,923,287	0	0	70,923,287	02-246
Subtotal		1.00	LS				1,312,321,351	110,797	70,923,287	
Per Unit Price		1.00	LS				1,312,321,351	110,797	70,923,287	

01- 77 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding Reference H28MLIT 746-748

Specification : Side span_Cable_Stayed Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main & Intermediate scaffolding	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	8,793,600	0	0	30,777,600	02-01
Additional work space scaffolding	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	79,961	0	0	279,864	02-02
Safety passage	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	4,396,800	0	0	15,388,800	02-03
Additional support for steeldeck	(Erection:2.5)+(Painting:1.0) month	2.50	month	0	0	4,396,800	0	0	10,992,000	02-04
Protective shelf for hanging scaffold	(Erection:2.5)+(Painting:1.0) month	2.50	month	0	0	4,396,800	0	0	10,992,000	02-05
Subtotal		1.00	LS						68,430,264	
Per Unit Price		1.00	LS				0	0	68,430,264	

01- 78 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fall prevention / protection and Ascending ladder Reference H28MLIT 746-748

Specification : Side span_Cable_Stayed Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fall prevention / protection	(Erection:2.5)+(Painting:1.0) month	2.50	month	0.00	0.00	1,905,280	0	0	4,763,200	02-07
Scaffolding for ascending piers		14.00	month	0.00	0.00	400,880	0	0	5,612,315	02-08
Subtotal		1.00	LS						10,375,515	
Per Unit Price		1.00	LS				0	0	10,375,515	

01- 79 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reassembling Reference H28MLIT P751

Specification : in construction yard Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =weight of re-assembling / (0.02 * (weight of re-assembling+20))		49.68	t							
Foreman for Bridges	= 1.0 person / daily productivity * 2.5	0.05	person	44,100.00			2,219.41			Lab-2
Skilled Labour for Bridges	= 6.0 person / daily productivity * 2.5	1.81	person	29,400.30			53,266.43			Lab-8
Unskilled Labour	= 1.0 person / daily productivity * 2.5	0.05	person	12,150.00			611.47			Lab-21
Miscellaneous cost	4%	0.04		56,097.31	0.00	0	2,243.89	(0.00)	0.00	
Rough Terrain Crane	70 t	0.020	day	399,481.60			8,041.85			OPE-73
Subtotal		1.00	t				66,383			
Per Unit Price		1.00	t				66,383	0	0	

01-	82	Productivity correction coefficient: Asia	Labour coefficient	Technical		Machine coefficient	none	

Item : Girder erection — Reference : H28国基 PIV-7-1-1

Specification : Side span by 350tCC mounted on 4,000t barge — Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight / (0.27 * a *(no of erection +11))		57.4	t/day							
Foreman for Bridges	=1.0 person * 2.5 *(10 t /57.6 t)	0.44	person	44,100.00			19,207.32			Lab-2
Skilled Labour for Bridges	=6.0 person * 2.5 *(10 t /57.6 t)	2.61	person	29,400.30			76,830.05			Lab-8
Unskilled Labour	=1.0 person * 2.5 *(10 t /57.6 t)	0.44	person	12,150.00			5,291.81			Lab-21
Miscellaneous cost	7%	0.07		101,329.18	0.00	0	7,093.04	(0.00)	0.00	
Crawler crane	350t hang	0.174	day	82,236.00	6,133.59		14,326.83	(1,068.57)		OPE-48
Barge	4000t	0.174	day	0.00	4,668.02	0	0.00	(813.24)	0.00	Mac-d(17)
Subtotal		10.00	t				122,749	1,882		
Per Unit Price		1.00	t				12,275	188	0	

01- 83 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Steel deck welding in site Reference H28MLIT P757

Specification : Automatic welding equipment Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity = 0.006 * L: actual length (m) + 9.4 , but 10<=D<= 22		22	m/day							
for completion, 4 month = 80 days	4909.68 m / (22 m/day) = 223.17 days									Lab-2
	224 days / 80 days = 2.8 party	3.00	party							Lab-8
Foreman for Bridges	=100 / D * 1.0 person * 2.5 * party	34	person	44,100.00			1,503,409.09			Lab-2
Skilled Labour for Bridges	=100 / D * (3.0+4.0) person * 2.5 * party	239	person	29,400.30			7,015,980.68			Lab-8
Equipment for steel deck welding	=100 / D * 1.7 * party	23.18	day	0.00	0.00	17,143	0	0	397,406	02-09
Consumable materials		100.00	m	0.00	0.00	10,795	0.00	(0.00)	1,079,500	02-10
Miscellaneous cost	16%	0.16		8,519,389.77	0.00	1,476,906	1,363,102.36	(0.00)	236,304.95	
Subtotal		100.00	m				9,882,492		1,713,211	
Per Unit Price		1.00	m				98,825	0	17,132	

01- 85

Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : Dead-bolting including temporary erection bolt

Reference H28MLIT 752

Specification : Main girder

Quantity・Unit : 100 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total nos of TCB(T) / ((0.52 * Total nos of TCB(T)/1000)+0.19)		1920	nos / day							
Foreman for Bridges	= (100 / 1410) * 1.0 person * 2.5	0.13	person	44,100.00			5,742.19			Lab-2
Skilled Labour for Bridges	= (100 / 1410) * 5.0 person * 2.5	0.65	person	29,400.30			19,140.82			Lab-8
Unskilled Labour	= (100 / 1410) * 1.0 person * 2.5	0.13	person	12,150.00			1,582.03			Lab-21
Miscellaneous cost	8%	0.08		26,465.04	0.00	0	2,117.20	(0.00)	0.00	
Torque share high tension bolt		100	nos							Mat-**
*材料で計上										
Temporary erection bolts and pins	M22	100	nos			47.4			4,740.00	
	JPY158/day*30day = JPY4740/month									
Subtotal		100.00	nos				28,582		4,740	
Per Unit Price		1.00	nos				286	0	47	

01- 88

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Cable material

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PC strands(7S15.6)	SWPR7BL	224.40	ton			300,000			67,320,000	
	Loss(2.0%)	0.02				67,320,000			1,346,400	
Adjustment Anchor	37H	20	nos			1,480,000			29,600,000	
	70H	20	nos			2,870,000			57,400,000	
Fixing Anchor	37H	20	nos			1,240,000			24,800,000	
	70H	20	nos			2,340,000			46,800,000	
HDPE duct	φ180	952.8	m			5,000			4,764,000	
	φ250	1,785.4	m			6,000			10,712,400	
	Loss(3.0%)			0	0	15,476,400	0	0	0	
Accessories for HDPE duct	for 37H	20	nos			456,000			9,120,000	
	for 70H	20	nos			603,000			12,060,000	
Cushion device	for 37H	20	nos			293,000			5,860,000	
	for 70H	20	nos			348,000			6,960,000	
Positioning/Adjustment pipe	for 37H	20	nos			320,000			6,400,000	
	for 70H	20	nos			400,000			8,000,000	
Filling material	Polyurethane	130	set			22,700			2,951,000	
Tape for anti-corrosion	B100mm(10m/roll)	78.00	roll			2,400			187,200	
Subtotal		1.00	LS						294,281,000	
Per Unit Price		1.00	LS				0	0	294,281,000	

01- 90 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Setting anchor device Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Adjustment Anchor										
5,000-10,000kN type	37H	20	set	86,832	0	0	1,736,633	0	0	02-13
17,000-24,000kN type	70H	20	set	104,941	0	0	2,098,810	0	0	02-15
Fixing Anchor										
5,000-10,000kN type	37H	20	set	86,832	0	0	1,736,633	0	0	02-16
17,000-24,000kN type	70H	20	set	104,941	0	0	2,098,810	0	0	02-18
Setting Positioning/Adjustment pipe										
5,000-10,000kN type	37H	20	set	63,278	0	0	1,265,557	0	0	02-19
17,000-24,000kN type	70H	20	set	94,917	0	0	1,898,335	0	0	02-21
Subtotal		1.00	LS				10,834,778			
Per Unit Price		1.00	LS				10,834,778	0	0	

01- 91 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Cable stressing Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Assembling duct										
5,000-10,000kN type	37H	20	set	481,471.65	0.00	0	9,629,433.00	(0.00)	0.00	02-22
17,000-24,000kN type	70H	20	set	664,993.40	0.00	0	13,299,868.00	(0.00)	0.00	02-24
Erection of duct										
5,000-10,000kN type	37H	20	set	402,024.40	0.00	0	8,040,488.00	(0.00)	0.00	02-25
17,000-24,000kN type	70H	20	set	322,040.32	0.00	0	6,440,806.40	(0.00)	0.00	02-27
Setting strands(including pre-stressing)										
5,000-10,000kN type	37H	20	set	2,727,585.88	0.00	0	54,551,717.60	(0.00)	0.00	02-28
17,000-24,000kN type	70H	20	set	2,367,760.23	0.00	0	47,355,204.60	(0.00)	0.00	02-30
Stressing strands										
5,000-10,000kN type	37H	20	set	53,790.17	0.00	0	1,075,803.40	(0.00)	0.00	02-31
17,000-24,000kN type	70H	20	set	158,029.25	0.00	0	3,160,585.00	(0.00)	0.00	02-33
Subtotal		1.00	LS				143,553,906			
Per Unit Price		1.00	LS				143,553,906	0	0	

01- 92

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Adjustment stressing force

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pulling back stressing										
5,000-10,000kN type	37H	20	set	253,482	0	0	5,069,646	0	0	02-34
17,000-24,000kN type	70H	20	set	579,936	0	0	11,598,721	0	0	02-36
Subtotal		1.00	LS				16,668,368			
Per Unit Price		1.00	LS				16,668,368	0	0	

01- 93 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Setting adjustment device Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Setting Positioning/Adjustment pipe										
5,000-10,000kN type	37H	40	set	107,580	0	0	4,303,213	0	0	02-37
17,000-24,000kN type	70H	40	set	188,266	0	0	7,530,623	0	0	02-39
Adjustment of Positioning/Adjustment pipe										
5,000-10,000kN type	37H	20	set	23,554	0	0	471,077	0	0	02-40
17,000-24,000kN type	70H	20	set	50,449	0	0	1,008,978	0	0	02-42
Subtotal		1.00	LS				13,313,891			
Per Unit Price		1.00	LS				13,313,891	0	0	

01- 94

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Miscellaneous work

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Completion of assembling duct										
5,000-10,000kN type	37H	20	set	93,514	0	0	1,870,283	0	0	02-43
17,000-24,000kN type	70H	20	set	128,494	0	0	2,569,887	0	0	02-45
Cutting excessive strands										
5,000-10,000kN type	37H	20	set	70,662	0	0	1,413,230	0	0	02-46
17,000-24,000kN type	70H	20	set	117,769	0	0	2,355,383	0	0	02-48
Filling material into duct										
5,000-10,000kN type	37H	20	set	53,790	0	0	1,075,803	0	0	02-49
17,000-24,000kN type	70H	20	set	80,685	0	0	1,613,705	0	0	02-51
Subtotal		1.00	LS				10,898,291			
Per Unit Price		1.00	LS				10,898,291	0	0	

01- 95

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Cable erection tool

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Winch (A)	3set200V 4P-18.5kW	400	day			11,100			4,440,000.00	
Winch (B)	3set200V 4P-7.5kW	400	day			6,700			2,680,000.00	
Baby hoist	100V above 200kgf	400	day			1,500			600,000.00	
Support for drum	200V 3P-100W	400	day			2,900			1,160,000.00	
Cutting table	100V 3P-1.1kW	400	day			1,100			440,000.00	
Wheel for strand		400	day			1,300			520,000.00	
Cramp		400	day			900			360,000.00	
Threader		400	day			310			124,000.00	
Peeler	including SCREWDRIVER	400	day			560			224,000.00	
Single strand jack	180kN 200mm stroke	400	day			2,600			1,040,000.00	
Hydraulic unit pump	200V 4P-2.2kW	400	day			2,100			840,000.00	
Miscellaneous cost	13%	0.13		0.00	0.00	12,428,000	0.00	(0.00)	1,615,640.00	
Consumable cost	3%	0.03		0.00	0.00	12,428,000	0.00	(0.00)	372,840.00	
Subtotal		1.00	LS						14,416,480	
Per Unit Price		1.00	LS				0	0	14,416,480	

01- 96

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Duct erection tool

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Pad welder	200V 4P-7kW	400	day			7,200			2,880,000	
Roller		800	day			610			488,000	
Support stage for duct	2 tires	6,000	day			120			720,000	
Movable Stage for slide pipe		800	day			190			152,000	
Movable Stage for duct		800	day			320			256,000	
Duct band	for 144mm	3,200	day			320			1,024,000	
Duct band	for 164mm	3,200	day			330			1,056,000	
Shed for welding		200	day			1,800			360,000	
Shed for prevention of sun shine		200	day			1,800			360,000	
Support bracket for duct		2,000	day			250			500,000	
Automatic winch	200V Cap. Above 550kgf	200	day			3,000			600,000	
Miscellaneous cost	13%	0.13		0	0	8,396,000	0	0	1,091,480	
Consumable cost	3%	0.03		0	0	8,396,000	0	0	251,880	
Subtotal		1.00	LS						9,739,360	
Per Unit Price		1.00	LS				0	0	9,739,360	

01- 97

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Stress adjustment equipment

Reference

Specification :

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Multi strand jack	4,000kN 50mm stroke	160	day			52,000			8,320,000.00	
Hydraulic unit pump	200V 4P-1.5kW	160	day			1,700			272,000.00	
Miscellaneous cost	10%	0.10		0.00	0.00	8,592,000	0.00	(0.00)	859,200.00	
Subtotal		1.00	set						9,451,200	
Per Unit Price		1.00	set				0	0	9,451,200	

01- 98

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Injection tool of anti-corrosion material

Reference

Specification :

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Injection pump	100V	40	day			22,000			880,000.00	
Mixier for material	100V	40	day			560			22,400.00	
Miscellaneous cost	10%	0.10		0.00	0.00	902,400	0.00	(0.00)	90,240.00	
Bucket	45L	16	nos			3,000			48,000.00	
Grouting hose	φ 15mm	120	m			170			20,400.00	
Grouting hose	φ 19mm	240	m			290			69,600.00	
Hose band		160	nos			180			28,800.00	
Miscellaneous cost	10%	0.10		0.00	0.00	166,800	0.00	(0.00)	16,680.00	
Subtotal		1.00	set						1,176,120	
Per Unit Price		1.00	set				0	0	1,176,120	

01- 99

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Lift up&down of materials

Reference

Specification :

Quantity・Unit : 1 time

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Crawler crane	100t hang	0.25	day	604,856.00			151,214.00			OPE-42
Barge	1500t	0.25	day	2,498,798.08	0.00	0	624,699.52	(0.00)	0	Mac-d(10)
Transportation 300 ton		0.250	day	727,824.52	0.00	0	181,956.13	(0.00)	0	Mac-d(22)
Tag boat 350PS_30GT		0.100	day	402,584.13	0.00	0	40,258.41	(0.00)	0	Mac-d(42)
Subtotal		1.00	time				998,128			
Per Unit Price		1.00	time				998,128	0	0	

01- 100 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fabrication of erection girder Reference

Specification : Cable stayed bridge Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main Erection Girder	Cable stayed bridge	1.00	set	0	0	63,574,000	0	0	63,574,000	02-230
Main Hoist	Cable stayed bridge	1.00	set	0	0	25,382,929	0	0	25,382,929	02-231
Scaffolding	Cable stayed bridge	1.00	set	0	0	5,046,000	0	0	5,046,000	02-232
Hydraulic Jack & Pump Set	Cable stayed bridge	1.00	set	0	0	47,216,840	0	0	47,216,840	02-233
Generator	25 KVA	1.46	t			1,470,000			2,146,200	
Erectric Wiring		1.00	LS			500,000			500,000	
Depreciation	50%	(0.50)		0	0	143,865,969	0	0	(71,932,984)	
Subtotal		1.00	set						71,932,984	
Per Unit Price		1.00	set				0	0	71,932,984	

01- 101 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Transportation in site(on land) Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Subtotal		1.00	LS							
Per Unit Price		1.00	LS				0	0	0	

01- 102 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Erection girder assembly and demolition Reference H28MLIT 790

Specification : for main span of Cable stayed bridge Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1 person * 15 days * 2.5	37.50	person	44,100.00			1,653,750.00			Lab-2
Skilled Labour for Bridges	= 6 person * 15 days * 2.5	225.00	person	29,400.30			6,615,067.50			Lab-8
Unskilled Labour	= 3 person * 15 days * 2.5	112.50	person	12,150.00			1,366,875.00			Lab-21
Crawler crane 200t hang	9.5 days	9.50	day	2,814,362.92			26,736,447.74			OPE-46
on girder										
Subtotal		1.00	LS				36,372,140			
Per Unit Price		1.00	LS				36,372,140	0	0	

01- 103

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Landing from barge

Reference

JICA study team

Specification : by 200 t CC

Quantity・ Unit : 100 t

Pending
→総期間算出、その費用をだす
→各橋種に割り振る（どの橋種でも荷揚・荷積を見積もるということ）
→使用工種のton数毎にわりふる
→つまりここでは主桁区間のton数となる

項目は
・クレーン200tCC
・橋梁世話役1
・橋梁特殊工2
・普通作業員4
の編成を【想定ton】(日当たり施工)で換算する

斜張橋の場合、荷揚・荷積を半々で想定する

Item	Spe					Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Subtotal		100.00	t							
Per Unit Price		1.00	t				0	0	0	

01- 104

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Transportation in site(Block)

Reference

Specification : Special trailer 40 t

Quantity・Unit : 14 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Special trailer truck basic charge	40 t	14.00	month	11,555,709			161,779,928			Quatation
Subtotal		14.00	month				161,779,928			
Per Unit Price		1.00	month				11,555,709	0	0	

01- 105 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Temporary placing Reference JICA study team

Specification : by 70 t CC Quantity・Unit : 530 block

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	20 Block	26.50	days							
Rough Terrain Crane	70 t	26.500	day	399,481.60			10,586,262.40			OPE-73
Foreman for Bridges	= 1 person * 2.5 * days	66.25	person	44,100.00			2,921,625.00			Lab-2
Skilled Labour for Bridges	= 2 person * 2.5 * days	132.50	person	29,400.30			3,895,539.75			Lab-8
Unskilled Labour	= 4 person * 2.5 * days	265.00	person	12,150.00			3,219,750.00			Lab-21
Subtotal		530.00	block				20,623,177			
Per Unit Price		1.00	block				38,912	0	0	

01- 107 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Transportation in site(Segment&Con. Block) Reference H28MLIT 802

Specification : by Carriage (carriage length: below 200m) Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	242 t /day	80 t / nos								
Foreman for Bridges	= 1.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	8.26	person	44,100.00			364,462.81			Lab-2
Skilled Labour for Bridges	= 8.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	66.12	person	29,400.30			1,943,821.49			Lab-8
Skilled Labour	= 1.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	8.26	person	14,580.00			120,495.87			Lab-20
Unskilled Labour	= 5.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	41.32	person	12,150.00			502,066.12			Lab-21
Miscellaneous cost	3.0%	0.03		364,462.81	0.00	0	10,933.88	(0.00)	0.00	
Subtotal		10.00	nos				2,941,780			
Per Unit Price		1.00	nos				294,178	0	0	

01- 108 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Loading on barge Reference JICA study team

Specification : by 200 t CC and 200 t TC Quantity・Unit : 26 SEG

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	6SEG	4.33	days							
200 t CC							Counted in "General Temp.work cost"			
200 t TC		4.33	day	1,162,392			5,037,032			OPE-76
Foreman for Bridges	= 2 person * 2.5 * days	21.67	person	44,100.00			955,500.00			Lab-2
Skilled Labour for Bridges	= 4 person * 2.5 * days	43.33	person	29,400.30			1,274,013.00			Lab-8
Unskilled Labour	= 8 person * 2.5 * days	86.67	person	12,150.00			1,053,000.00			Lab-21
Subtotal		26.00	SEG				8,319,545			
Per Unit Price		1.00	SEG				319,983	0	0	

01- 110 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Segment erection Reference JICA study team

It is based on a IRABU bridge construction track record.

Specification : Quantity・Unit : 1 SEG

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.0 person * 2.5	2.50	person	44,100.00			110,250.00			Lab-2
Skilled Labour for Bridges	6.0 person * 2.5	15.00	person	29,400.30			441,004.50			Lab-8
Unskilled Labour	4.0 person * 2.5	10.00	person	12,150.00			121,500.00			Lab-21
Erection tool	1/0.442	2.26	day			5,400			12,204.00	Ref. P536
										H28BE
Subtotal		1.00	SEG				672,755		12,204	
Per Unit Price		1.00	SEG				672,755	0	12,204	

01- 112 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding Reference

Specification : Main span Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main & Intermediate scaffolding	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	1,099,200	0.00	(0.00)	6,595,200.00	02-255
Additional work space scaffolding	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	20,192	0.00	(0.00)	121,152.00	02-256
Safety passage	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	549,600	0.00	(0.00)	3,297,600.00	02-257
Additional support for steeldeck	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	549,600	0.00	(0.00)	3,297,600.00	02-258
Protective shelf for hanging scaffold	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	549,600	0.00	(0.00)	3,297,600.00	02-259
Subtotal		1.00	LS						16,609,152	
Per Unit Price		1.00	LS				0	0	16,609,152	

01- 113

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Fall prevention and Scaffolding for ascending piers

Reference

Specification : Main span

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fall prevention / protection	Cable Stayed Bridge_MainSpan(1side)	6.00	month	0.00	0.00	476,320	0.00	(0.00)	2,857,920.00	
Subtotal		1.00	LS						2,857,920	
Per Unit Price		1.00	LS				0	0	2,857,920	

01- 116 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Movement and instllation of Erection nose Reference H28MLIT 790

Specification : to next segment Quantity・Unit : 1 time

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 2 person * 2.0 days * 2.5	10.00	person	44,100.00			441,000.00			Lab-2
Skilled Labour for Bridges	= 16 person * 2.0 days * 2.5	80.00	person	29,400.30			2,352,024.00			Lab-8
Unskilled Labour	= 9 person * 2.0 days * 2.5	45.00	person	12,150.00			546,750.00			Lab-21
Subtotal		1.00	time				3,339,774			
Per Unit Price		1.00	time				3,339,774	0	0	

01- 122 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-11 (Exterior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 5 times	26.13	person	20,160.00			526,680.00			Lab-9
	K1: 0.1									
Paint										
Zinc Rich Paint			kg			1,150			0.00	
Epoxy Resin Paint Primer			kg			1,010			0.00	
Fluorocarbon Resin Intermediate Paint		14.00	kg			1,080			15,120.00	
Fluorocarbon Resin Finish Paint		12.00	kg			3,850			46,200.00	
Modified Epoxy Resin Paint		13.30	kg			1,010			13,433.00	
Modified Epoxy Resin Paint			kg			1,010			0.00	
Ultra Thick Modified Epoxy Resin Paint		100.00	kg			1,270			127,000.00	
Thinner										
Zinc Rich Paint Thinner		0.00	kg			375			0.00	
Epoxy Resin Paint Primer Thinner		10.00	kg			355			3,550.00	
Fluorocarbon Resin Intermediate Paint Thinner		1.40	kg			355			497.00	
Fluorocarbon Resin Finish Paint Thinner		1.20	kg			390			468.00	
Modified Epoxy Resin Paint Thinner		1.33	kg			355			472.15	
Miscellaneous cost	4%	0.04		526,680.00	0.00	206,740.15	21,067.20	(0.00)	8,269.61	
Subtotal		100.00	m2				617,854		215,010	
Per Unit Price		1.00	m2				6,179	0	2,150	

01- 123 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-12 (Interior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 3 times	23.51	person	20,160.00			474,012.00			Lab-9
	K1: 0.1									
Paint	K2: 0.5									
Zinc Rich Paint			kg			1,150			0.00	
Epoxy Resin Paint Primer			kg			1,010			0.00	
Fluorocarbon Resin Intermediate Paint			kg			1,080			0.00	
Fluorocarbon Resin Finish Paint			kg			3,850			0.00	
Modified Epoxy Resin Paint		13.30	kg			1,010			13,433.00	
Modified Epoxy Resin Paint		100.00	kg			1,010			101,000.00	
Ultra Thick Modified Epoxy Resin Paint			kg			1,270			0.00	
Thinner										
Zinc Rich Paint Thinner		0.00	kg			375			0.00	
Epoxy Resin Paint Primer Thinner		0.00	kg			355			0.00	
Fluorocarbon Resin Intermediate Paint Thinner		0.00	kg			355			0.00	
Fluorocarbon Resin Finish Paint Thinner		0.00	kg			390			0.00	
Modified Epoxy Resin Paint Thinner		17.06	kg			355			6,055.88	
Miscellaneous cost	4%	0.04		474,012.00	0.00	120,488.88	18,960.48	(0.00)	4,819.56	
Subtotal		100.00	m2				563,079		125,308	
Per Unit Price		1.00	m2				5,631	0	1,253	

01- 124 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-13 (Exterior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 6 times	31.35	person	20,160.00			632,016.00			Lab-9
	K1: 0.1									
Paint										
Zinc Rich Paint			kg			1,150			0.00	
Epoxy Resin Paint Primer		70.00	kg			1,010			70,700.00	
Fluorocarbon Resin Intermediate Paint		14.00	kg			1,080			15,120.00	
Fluorocarbon Resin Finish Paint		12.00	kg			3,850			46,200.00	
Modified Epoxy Resin Paint		20.00	kg			1,010			20,200.00	
Modified Epoxy Resin Paint		20.00	kg			1,010			20,200.00	
Ultra Thick Modified Epoxy Resin Paint		100.00	kg			1,270			127,000.00	
Organic Zinc Rich Paint		60.00	kg			1,150			69,000.00	JICA study team
Thinner										
Zinc Rich Paint Thinner		0.00	kg			375			0.00	
Epoxy Resin Paint Primer Thinner		17.00	kg			355			6,035.00	
Fluorocarbon Resin Intermediate Paint Thinner		1.40	kg			355			497.00	
Fluorocarbon Resin Finish Paint Thinner		1.20	kg			390			468.00	
Modified Epoxy Resin Paint Thinner		4.00	kg			355			1,420.00	
Organic Zinc Rich Paint		6.00	kg			375			2,250.00	JICA study team
Miscellaneous cost	4%	0.04		632,016.00	0.00	379,090.00	25,280.64	(0.00)	15,163.60	
Subtotal		100.00	m2				727,403		394,254	
Per Unit Price		1.00	m2				7,274	0	3,943	

01- 125 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-14 (Interior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 4 times	20.90	person	20,160.00			421,344.00			Lab-9
	K1: 0.1									
Paint										
Zinc Rich Paint			kg			1,150			0.00	
Epoxy Resin Paint Primer			kg			1,010			0.00	
Fluorocarbon Resin Intermediate Paint			kg			1,080			0.00	
Fluorocarbon Resin Finish Paint			kg			3,850			0.00	
Modified Epoxy Resin Paint			kg			1,010			0.00	
Modified Epoxy Resin Paint			kg			1,010			0.00	
Ultra Thick Modified Epoxy Resin Paint		100.00	kg			1,270			127,000.00	
Organic Zinc Rich Paint		60.00	kg			1,150			69,000.00	JICA study team
Thinner										
Zinc Rich Paint Thinner		0.00	kg			375			0.00	
Epoxy Resin Paint Primer Thinner		10.00	kg			355			3,550.00	
Fluorocarbon Resin Intermediate Paint Thinner		0.00	kg			355			0.00	
Fluorocarbon Resin Finish Paint Thinner		0.00	kg			390			0.00	
Modified Epoxy Resin Paint Thinner		0.00	kg			355			0.00	
Organic Zinc Rich Paint		6.00	kg			375			2,250.00	JICA study team
Miscellaneous cost	4%	0.04		421,344.00	0.00	201,800.00	16,853.76	(0.00)	8,072.00	
Subtotal		100.00	m2				508,304		209,872	
Per Unit Price		1.00	m2				5,083	0	2,099	

01-	126	Productivity correction coefficient:	Labour coefficient	Technical	Machine coefficient	none
		Asia				

Item : Painting in site — Reference : H5MLIT 669

Specification : In-Organic Zinc Rich Paint — Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 1 times	20.90	person	20,160.00			421,344.00			Lab-9
	K1: 0.1									
Paint										
Zinc Rich Paint		60.00	kg			1,150			69,000.00	
Thinner										
Zinc Rich Paint Thinner		6.00	kg			375			2,250.00	
Miscellaneous cost	4%	0.04		421,344.00	0.00	71,250.00	16,853.76	(0.00)	2,850.00	
Subtotal		100.00	m2				508,304		74,100	
Per Unit Price		1.00	m2				5,083	0	741	

01- 128 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Rubber Bearing Reference H28MLIT 751

Specification : Normal type(Steel Girder) Quantity・Unit : 4 nos / pier

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity(Dn)	= 1 / (0.095 W +0.093)	0.41								
W = Total weight of bearing / No of bearing :(on 1 pier)	Total weight = 100 ton									
*total weight includs anchor bolts weight	No. of bearing = 4 nos									
Foreman for Bridges	= 1 / Dn * 1 person * 2.5	6.17	person	44,100.00			272,097.00			Lab-2
Skilled Labour for Bridges	= 1 / Dn * 5 person * 2.5	30.85	person	29,400.30			906,999.26			Lab-8
Unskilled Labour	= 1 / Dn * 1 person * 2.5	6.17	person	12,150.00			74,965.50			Lab-21
Miscellaneous cost	2%	0.02		1,254,061.76	0.00	0	25,081.24	(0.00)	0.00	
*including generator and fuel										
Subtotal		4.00	nos / pier				1,279,143			
Per Unit Price		1.00	nos / pier				319,786	0	0	

01- 129 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Rubber Bearing Reference H28MLIT 751

Specification : Separat perform type(Steel Girder) Quantity・Unit : 32 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity(Dn)	= 1 / (0.124 W +0.296)	2.7								
W = Total weight of bearing / Total No of bearing	Total weight = 20 ton									
*total weight includs anchor bolts weight	No. of bearing = 32 nos									
Foreman for Bridges	= No.of bearing / Dn * 1 person * 2.5	29.63	person	44,100.00			1,306,666.67			Lab-2
Skilled Labour for Bridges	= No.of bearing / Dn * 5 person * 2.5	148.15	person	29,400.30			4,355,600.00			Lab-8
Unskilled Labour	= No.of bearing / Dn * 1 person * 2.5	29.63	person	12,150.00			360,000.00			Lab-21
Miscellaneous cost	2%	0.02		6,022,266.67	0.00	0	120,445.33	(0.00)	0.00	
*including generator and fuel										
Crawler crane	50 ~ 55t hang	11.85	day	297,147	0		3,521,745	0		OPE-26
Barge	800t	11.85	day	1,388,221	0	0	16,452,991	0	0	Mac-d(20)
Tag boat	800PS_70GT	3.95	day	1,119,130			4,421,256			OPE-66
Subtotal		32.00	nos				30,538,704			
Per Unit Price		1.00	nos				954,335	0	0	

01- 130 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Metal bearing Reference H28MLIT 751

Specification : Steel girder Quantity・Unit : 12 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity(Dn) *N=nos	= N / (0.2 a (N+8)	2.0								
W = Total weight of bearing / No of bearing	Total weight = 72 ton									
*total weight includs anchor bolts weight	No. of bearing = 12 nos									
Foreman for Bridges	= No.of bearing / Dn * 1 person * 2.5	15.00	person	44,100			661,500			Lab-2
Skilled Labour for Bridges	= No.of bearing / Dn * 5 person * 2.5	75.00	person	29,400			2,205,023			Lab-8
Unskilled Labour	= No.of bearing / Dn * 1 person * 2.5	15.00	person	12,150			182,250			Lab-21
Miscellaneous cost	23%	0.23		3,048,773	0	0	701,218	0	0	
*including generator and fuel										
Crawler crane	50 ~ 55t hang	6.00	day	297,147	0		1,782,883	0		OPE-26
Barge	800t	6.00	day	1,388,221	0	0	8,329,327	0	0	Mac-d(20)
Tag boat	800PS_70GT	2.00	day	1,119,130			2,238,261			OPE-66
Subtotal		12.00	nos				16,100,461			
Per Unit Price		1.00	nos				1,341,705	0	0	

01- 132

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Modular type

Reference JICA stud

Specification : P10 mageba KM J (LR-5 M)

Quantity・Unit : 22.9 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Expansion Joint	P10	22.90	m	0.00	0.00	1,045,808	0.00	(0.00)	23,948,999.99	Mat-400
Concreting_on_river	Class D	6.87	m3	105,754.07	0.00	0.00	726,530.46	(0.00)	0.00	01-266
Rebar work_SD345	Arranging D13	0.687	ton	126,764	0	78,422	87,087	0	53,876	00-79
Rebar work_SD345	Assembling D13	0.687	ton	154,137	0	0	105,892	0	0	00-82
Crawler crane	50 ~ 55t hang	1.00	day	297,147	0		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221	0	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130			223,826			OPE-66
Foreman for Bridges		1.00	person	44,100.00			44,100.00			Lab-2
Skilled Labour for Bridges		2.00	person	29,400.30			58,800.60			Lab-8
Unskilled Labour		6.00	person	12,150.00			72,900.00			Lab-21
Rebar Worker		4.00	person	18,270.00			73,080.00			Lab-15
Subtotal		22.90	m				3,077,584		24,002,876	
Per Unit Price		1.00	m				134,392	0	1,048,161	

01- 133

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Modular type

Reference JICA stud

Specification : P13 mageba KM J (LR-6 M)

Quantity・Unit : 22.9 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Expansion Joint	P13	22.90	m	0.00	0.00	1,271,790	0.00	(0.00)	29,124,000.16	Mat-401
Concreting_on_river	Class D	6.87	m3	105,754.07	0.00	0.00	726,530.46	(0.00)	0.00	01-266
Rebar work_SD345	Arranging D13	0.687	ton	126,764	0	78,422	87,087	0	53,876	00-79
Rebar work_SD345	Assembling D13	0.687	ton	154,137	0	0	105,892	0	0	00-82
Crawler crane	50 ~ 55t hang	1.00	day	297,147	0		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221	0	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130			223,826			OPE-66
Foreman for Bridges		1.00	person	44,100.00			44,100.00			Lab-2
Skilled Labour for Bridges		2.00	person	29,400.30			58,800.60			Lab-8
Unskilled Labour		6.00	person	12,150.00			72,900.00			Lab-21
Rebar Worker		4.00	person	18,270.00			73,080.00			Lab-15
Subtotal		22.90	m				3,077,584		29,177,876	
Per Unit Price		1.00	m				134,392	0	1,274,143	

01- 134 Productivity correction coefficient: ASIA Labour coefficient Simple Machine coefficient none

Item : Installation of barrier, railing Reference (JICA study team) H25MLIT P975

Specification : Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 3.0 person/100m * 1.5	4.50	person	21,870			98,415			Lab-1
Unskilled Labour	= 12.0 person/100m * 1.5	18.00	person	12,150			218,700			Lab-21
Miscellaneous cost	10%	0.10		317,115			31,712			
Truck	3～3.5 t Capacity	0.33	day	249,545	0		82,350	0		OPE-6
1 time = 30 m										
Subtotal		100.00	m				431,176			
Per Unit Price		1.00	m				4,312	0	0	

01-	135	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Barrier Fabrication　　Reference H28国基 PIV-7-1-1

Specification : Cable Stayed Bridge　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		1,028.54	nos			26,900			27,667,834	
G	107.140ton									
g	9.6person/ton									
a	0									
STKR400	125*125*6	79.897	ton	0	0	81,000	0	0	6,471,629	Mat-253
SS400	L300	13.944	ton	0	0	72,900	0	0	1,016,525	Mat-151
M16*40		0.430	ton	0	0	1,342,640	0	0	576,798	
Hot-Dip Galvanization	HDZ55	107.14	t			55,800			5,978,412	Mat-415
Rebar work_SD345	Arranging D16-D25	11.044	ton	114,348	0	81,271	1,262,889	0	897,581	00-80
Rebar work_SD345	Assembling D16-D25	11.044	ton	128,135	0	0	1,415,157	0	0	00-83
Subtotal		1.00	LS				2,678,046		42,608,778	
Per Unit Price		1.00	LS				2,678,046	0	42,608,778	

01- 136

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Catch Basin Fabrication

Reference JICA study team

Specification :

Quantity・Unit : 140 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		180.18	nos			26,900			4,846,842	
G	13.860ton									
g	13.0person/ton									
a	0									
PL	SM400A	10.780	ton			118,500			1,277,430	
Pipe	STK400	1.260	ton			135,000			170,100	
Chain	SUS304	0.140	ton			2,338,582			327,401	
L	50*50*6(SS400)	0.420	ton			71,000			29,820	
Hot-Dip Galvanization	HDZ55	13.86	t			55,800			773,388	Mat-415
Rebar work_SD345	Arranging D16-D25	1.260	ton	114,348	0	81,271	144,078	0	102,401	00-80
Rebar work_SD345	Assembling D16-D25	1.260	ton	128,135	0	0	161,450	0	0	00-83
Subtotal		140.00	nos				305,528		7,527,382	
Per Unit Price		1.00	nos				2,182	0	53,767	

01- 137 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Anchor bolt setting for concrete Reference H25MLIT 880

Specification : Quantity・Unit : 100 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	2.7 person * 1.5	1.35	person	21,870.00			29,524.50			Lab-1
Skilled Labour	1.8 person * 1.5	2.70	person	14,580.00			39,366.00			Lab-20
Unskilled Labour	0.9 person * 1.5	4.05	person	12,150.00			49,207.50			Lab-21
Miscellaneous cost	2%	0.02		118,098.00	0.00	0	2,361.96	(0.00)	0.00	
Anchor Bolt	M16×100	100	nos			205			20,500.00	Mat-416
Subtotal		100.00	nos				120,460		20,500	
Per Unit Price		1.00	nos				1,205	0	205	

01- 138 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Catch basin setting Reference H25MLIT 974

Specification : Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 1.0 person * 1.5	1.50	person	21,870.00			32,805.00			Lab-1
Unskilled Labour	= 4.0 person * 1.5	6.00	person	12,150.00			72,900.00			Lab-21
Miscellaneous cost	9%	0.09		105,705.00	0.00	0	9,513.45	(0.00)	0.00	
Subtotal		10.00	nos				115,218			
Per Unit Price		1.00	nos				11,522	0	0	

01- 142 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Concrete for PC-I girder Reference H12MLIT 626

Specification : 40 N/mm2 Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 1.0 person * 2.5	2.50	person	21,870.00			54,675.00			Lab-1
Skilled Labour	= 1.3 person * 2.5	3.25	person	14,580.00			47,385.00			Lab-20
Form worker	= 2.8 person * 2.5	7.00	person	18,270.00			127,890.00			Lab-18
Scaffolder	= 0.1 person * 2.5	0.25	person	18,270.00			4,567.50			Lab-6
Unskilled Labour	= 3.8 person * 2.5	9.50	person	12,150.00			115,425.00			Lab-21
Concrete Class B	40 N/mm2 (V*1.06)	10.60	m3	89,825.84	0.00	0	952,153.90	(0.00)	0.00	02-221
Ceramic Insert	M12	34.00	nos	0.00	0.00	257	0.00	(0.00)	8,751.60	Mat-417
Miscellaneous cost	12.2%	0.122		349,942.50	0.00	0	42,692.99	(0.00)	0.00	
Subtotal		10.00	m3				1,344,789		8,752	
Per Unit Price		1.00	m3				134,479	0	875	

01- 144 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Rebar work Reference H12MLIT 625

Specification : D16-25 Quantity・Unit : 1 ton

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		= 0.6 person * 2.5	1.50	person	21,870			32,805			Lab-1
Rebar work		= 4.0 person * 2.5	10.00	person	18,270			182,700			Lab-15
Unskilled Labour		= 2.8 person * 2.5	7.00	person	12,150			85,050			Lab-21
Re-bar_SD345	D16-25, deformed bar	D16-25 (weight * 1.08)	1.08	t	40,450	0	72,534	43,686	0	78,337	Mat-2
Miscellaneous cost		5.3%	0.053		300,555	0	0	15,929	0	0	
Subtotal			1.00	ton				360,170		78,337	
Per Unit Price			1.00	ton				360,170	0	78,337	

01- 147 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Installation of PC cable Reference H12MLIT 625

Specification : 12S12.7mm (SWPR7BL) Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1.4 person * 2.5	3.50	person	44,100			154,350			Lab-2
Skilled Labour for Bridges	= 5.6 person * 2.5	14.00	person	29,400			411,604			Lab-8
Unskilled Labour	= 5.2 person * 2.5	13.00	person	12,150			157,950			Lab-21
PC Strand	12S12.7(SWPR7BL)	975.24	kg	1,549	0	0	1,510,774	0	0	Mat-436
Embedded materials	Sheath for 12S15.2	104.00	m	0	0	631	0	0	65,614	Mat-418
Miscellaneous cost	12.2%	0.122		723,904	0	0	88,316	0	0	
Subtotal		100.00	m				2,322,994		65,614	
Per Unit Price		1.00	m				23,230	0	656	

01- 148 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Prestressing Reference H12MLIT 626

Specification : for PC-I girder Quantity・Unit : 10 Cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1.5 person * 2.5	3.75	person	44,100			165,375			Lab-2
Skilled Labour for Bridges	= 5.2 person * 2.5	13.00	person	29,400			382,204			Lab-8
Unskilled Labour	= 4.5 person * 2.5	11.25	person	12,150			136,688			Lab-21
Anchor	Anchor (AC15 Freyssine)	20.00	set	0	0	14,400	0	0	288,000	Mat-437
Miscellaneous cost	11.3%	0.113		547,579	0	0	61,876	0	0	
Subtotal		10.00	Cable				746,143		288,000	
Per Unit Price		1.00	Cable				74,614	0	28,800	

01- 149 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Transportation Reference H28MLIT 802

Specification : by Carriage (carriage length: below 200m) Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	242 t /day	80 t / nos								
Foreman for Bridges	= 1.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	8.26	person	44,100.00			364,462.81			Lab-2
Skilled Labour for Bridges	= 8.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	66.12	person	29,400.30			1,943,821.49			Lab-8
Skilled Labour	= 1.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	8.26	person	14,580.00			120,495.87			Lab-20
Unskilled Labour	= 5.0 person * 10 nos * 80 t / 242 (t / day) * 2.5	41.32	person	12,150.00			502,066.12			Lab-21
Miscellaneous cost	3.0%	0.03		364,462.81	0.00	0	10,933.88	(0.00)	0.00	
Subtotal		10.00	nos				2,941,780			
Per Unit Price		1.00	nos				294,178	0	0	

01- 150 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Rail installation&remove Reference H28MLIT 804

Specification : 30 kg / m rail (2 parallel rails) Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	3.5 day /100m									
Foreman for Bridges	= 0.6 person * 2.5	1.50	person	44,100			66,150			Lab-2
Skilled Labour for Bridges	= 2.0 person * 2.5	5.00	person	29,400			147,002			Lab-8
Unskilled Labour	= 0.7 person * 2.5	1.75	person	12,150			21,263			Lab-21
Rail	30 kg / m	20.00	m	0	0	0	0	0	0	Mat-77
Depreciation	70%	(0.70)		0	0	0	0	0	0	
Subtotal		10.00	m				234,414			
Per Unit Price		1.00	m				23,441	0	0	

01-	151	Productivity correction coefficient:	Labour coefficient	Technical	Machine coefficient	none
		Asia				H12MLIT 627
Item :	Equipment Rent. Install & Removal			Reference		H28MLIT 802

Specification : PC-I girder_Ramp Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Equipment for moving girder	30days/month * 4.5 months									
Winch	3 t 22 kw	135	day	10,505			1,418,175			
Carriage	60 t * 2 cars	135	day	110,096			14,862,960			
	30days/month * 2.5 months + 5days									
Jack for prestressing	2,200 kN (225t)	80	day	69,712			5,576,960			
Steel form	151.25m2 * 2 sets * 80days	24,200	m2*day	4,724			114,320,800			
Fabrication table	(L=30+1 m) * 2 sets * 80days	4,960	m / day	1,226			6,080,960			
Subtotal		1.00	LS				142,259,855			
Per Unit Price		1.00	LS				142,259,855	0	0	

01- 152 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Steel Base Formwork Works Reference H12MLIT 627

Specification : Install / Remove Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 0.2 person * 2.5	0.50	person	21,870.00			10,935.00			Lab-1
Form work	= 0.9 person * 2.5	2.25	person	18,270.00			41,107.50			Lab-18
Unskilled Labour	= 2.2 person * 2.5	5.50	person	12,150.00			66,825.00			Lab-21
Welder	= 0.5 person * 2.5	1.25	person	19,440.00			24,300.00			Lab-17
Subtotal		10.00	m				143,168			
Per Unit Price		1.00	m				14,317	0	0	

01- 153 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Steel Base Formwork Adjustment Works Reference H12MLIT 627

Specification : Quantity・Unit : 1 nos

数量は4 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Form work	= 0.02 * (L+1) * 2.5 = 0.02 * 30 * 2.5 person	1.50	person	18,270.00			27,405.00			Lab-18
Unskilled Labour	= 0.01 * (L+1) * 2.5 = 0.01 * 30 * 2.5 person	0.75	person	12,150.00			9,112.50			Lab-21
				27,405.00			0.00			
Total girder no. / 2 sets fabrication stage	=8 nos / 2 sets = 4 nos/set									
Subtotal		1.00	nos				36,518			
Per Unit Price		1.00	nos				36,518	0	0	

01- 154 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC Precast Panels Sealing Works Reference H28MLIT 808

Specification : Both sides by indicated length Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.4 person * 2.5	1.00	person	44,100			44,100			Lab-2
Unskilled Labour	= 1.3 person * 2.5	3.25	person	12,150			39,488			Lab-21
Miscellaneous cost	5%	0.05		44,100			2,205			
Joint filler	15mm x 10mm	205.00	m	0	0	351	0	0	71,955	Mat-438
Non-shrinkage mortar	Total 301m	0.36	m3	2,565,045	0	0	923,416	0	0	02-229
Subtotal		100.00	m				1,009,209		71,955	
Per Unit Price		1.00	m				10,092	0	720	

01- 155 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC pannel temp. storage Reference H28MLIT 808

Specification : Quantity・Unit : 100 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	= 2.9 person * 2.5	7.25	person	29,400.30			213,152.18			Lab-8
Unskilled Labour	= 0.2 person * 2.5	0.50	person	12,150.00			6,075.00			Lab-21
Rough terrain crane	25t hang	1.30	day	232,008.00	0.00		301,610.40	(0.00)		OPE-27
Subtotal		100.00	nos				609,038			
Per Unit Price		1.00	nos				6,090	0	0	

01- 156 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC Precast Panels Installation Works Reference H28MLIT 808

Specification : Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.2 person * 2.5	0.50	person	44,100.00			22,050.00			Lab-2
Skilled Labour for Bridges	= 0.9 person * 2.5	2.25	person	29,400.30			66,150.68			Lab-8
Unskilled Labour	= 0.2 person * 2.5	0.50	person	12,150.00			6,075.00			Lab-21
Rough terrain crane	25t hang	1.30	day	232,008.00	0.00		301,610.40	(0.00)		OPE-27
PC precast pannel		10.00	nos	260,878.50	0.00	0	2,608,785.00	(0.00)	0.00	Mat-440
Subtotal		10.00	nos				3,004,671			
Per Unit Price		1.00	nos				300,467	0	0	

01- 157 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : RC Precast Panels Joint Works Reference H28MLIT 809

Specification : between PC plates Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.2 person * 2.5	0.50	person	44,100.00			22,050.00			Lab-2
Unskilled Labour	= 0.2 person * 2.5	0.50	person	12,150.00			6,075.00			Lab-21
Miscellaneous cost	9%	0.09		28,125.00	0.00	0	2,531.25	(0.00)	0.00	
Non-shrinkage mortar		0.07	m3	2,565,045	0	0	179,553	0	0	02-229
Subtotal		100.00	m				210,209			
Per Unit Price		1.00	m				2,102	0	0	

01- 160 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Form work Reference H12建土 P640

Specification : Cross beam Quantity・Unit : 10 m2

135 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.5 person * 2.5	1.25	person	44,100.00			55,125.00			Lab-2
Form work	= 2.6 person * 2.5	6.50	person	18,270.00			118,755.00			Lab-18
Unskilled Labour	= 1.8 person * 2.5	4.50	person	12,150.00			54,675.00			Lab-21
Miscellaneous cost	11%	0.11		228,555.00	0.00	0	25,141.05	(0.00)	0.00	
Subtotal		10.00	m2				253,696			
Per Unit Price		1.00	m2				25,370	0	0	

01- 161 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Rebar work Reference H28MLIT 805

Specification : Cross beam Quantity・Unit : 1 t

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		= 0.8 person * 2.5	2.00	person	21,870.00			43,740.00			Lab-1
Rebar work		= 3.8 person * 2.5	9.50	person	18,270.00			173,565.00			Lab-15
Unskilled Labour		= 1.7 person * 2.5	4.25	person	12,150.00			51,637.50			Lab-21
Miscellaneous cost		5%	0.05		268,942.50	0.00	0	13,447.13	(0.00)	0.00	
Re-bar_SD345	D16-25, deformed bar	D16-25 (weight * 1.08)	1.08	t	40,450	0	72,534	43,686	0	78,337	Mat-2
Subtotal			1.00	t				326,076		78,337	
Per Unit Price			1.00	t				326,076	0	78,337	

01- 162 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Concrete work(Transporting length below 30m) Reference H28MLIT 805

Specification : Cross beam Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	40 m3/day									
Foreman for Bridges	= 2.9 person * 2.5	7.25	person	44,100			319,725			Lab-2
Skilled Labour	= 4.0 person * 2.5	10.00	person	14,580			145,800			Lab-20
Form work	= 9.3 person * 2.5	23.25	person	18,270			424,778			Lab-18
Unskilled Labour	= 9.1 person * 2.5	22.75	person	12,150			276,413			Lab-21
Miscellaneous cost	9%	0.09		1,166,715	0	0	105,004	0	0	
Concrete	Class C I	10.60	m3	85,497	0	0	906,267	0	0	02-222
Concrete pump car	90-110 m3/h, Boom type	1.50	hour	109,946	0		164,918	0		OPE-32
Subtotal		10.00	m3				2,342,905			
Per Unit Price		1.00	m3				234,290	0	0	

01- 163 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar installation Reference H28MLIT 828

Specification : Cross beam Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1.6 person * 2.5	15.75	person	44,100			694,575			Lab-2
Skilled Labour for Bridges	= 13.6 person * 2.5	34.00	person	29,400			999,610			Lab-8
Unskilled Labour	= 7.5 person * 2.5	18.75	person	12,150			227,813			Lab-21
Miscellaneous cost	7%	0.07		1,921,998	0	0	134,540	0	0	
*including "Metal sheath, Grout material etc"										
PC bar	SBPR 930/1180 φ32mm(3m)	1.00	t	0	0	306,900	0	0	306,900	Mat-425
Rough terrain crane	25t hang	1.30	day	232,008.00	0.00		301,610.40	(0.00)		OPE-27
Subtotal		1.00	t				2,358,148		306,900	
Per Unit Price		1.00	t				2,358,148	0	306,900	

01- 164

Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : PC bar anchor setting

Reference H28MLIT 828

Specification : Cross beam

Quantity・Unit : 10 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour for Bridges	= 1.1 person * 2.5	2.75	person	29,400.30			80,850.83			Lab-8
				80,850.83			0.00			
Miscellaneous cost	19%	0.19		80,850.83	0.00	0	15,361.66	(0.00)	0.00	
*including "Grouting hose etc"										
Anchor		20.00	set	0.00	0.00	3,690	0.00	(0.00)	73,800.00	Mat-433
Subtotal		10.00	set				96,212		73,800	
Per Unit Price		1.00	set				9,621	0	7,380	

01- 165 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar prestressing Reference H28MLIT 828

Specification : Cross beam Quantity・Unit : 10 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	= 4.6 person * 2.5	11.50	person	29,400.30			338,103.45			Lab-8
Unskilled Labour	= 2.0 person * 2.5	5.00	person	12,150.00			60,750.00			Lab-21
Miscellaneous cost	4%	0.04		487,053.45	0.00	0	19,482.14	(0.00)	0.00	
*including "Metal sheath, Grout material etc"										
Subtotal		10.00	set				506,536			
Per Unit Price		1.00	set				50,654	0	0	

01- 166 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Scaffolding Reference H28MLIT 794

Specification : Cross beam Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Hanging type	= (L1 + L2X + Ny) * A (JPY)	1.00	LS			3,511,148			3,511,148	
	702229.5									
	L1 = 245									
	L2 = 280									
	N = 0.14									
Months	2									
y: Skilled labour for bridg	1000					28,000			0	Lab-8
A(m2)	743.1									
	A=W:全幅員(地覆外縁距離)*L: 橋長									
Around concrete structure	= (1,600 + 900 X + 0.38 y) * L (JPY)									
	372240									
Months	2.5									
y: Skilled Labour for Brid	1000			29,400.30			0.00			Lab-8
L(m)	88									
AO1(m)	28									
PO1(m)	15									
PO2(m)	15									
PO3(m)	15									
PO4(m)	15									
Subtotal		1.00	LS						3,511,148	
Per Unit Price		1.00	LS				0	0	3,511,148	

01- 168 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Form work for PC-I deck Reference H28MLIT 809

Specification : Ramp Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 12.1 person * 2.5	30.25	person	21,870.00			661,567.50			Lab-1
Form work	= 26.8 person * 2.5	67.00	person	18,270.00			1,224,090.00			Lab-18
Unskilled Labour	= 11.6 person * 2.5	29.00	person	12,150.00			352,350.00			Lab-21
Miscellaneous cost	28%	0.28		2,238,007.50	0.00	0	626,642.10	(0.00)	0.00	
*Including material of form, support, pipes etc										
Subtotal		100.00	m2				2,864,650			
Per Unit Price		1.00	m2				28,647	0	0	

01- 170 Productivity correction coefficient: Asia

Labour coefficient: Simple

Machine coefficient: none

Item : Concreting(including curing fee) Reference H12MLIT 645

Specification : Deck slab Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	40 m3/day									
Foreman	= 0.3 person * 1.5	0.45	person	44,100			19,845			Lab-2
Skilled Labour	= 1.5 person * 1.5	2.25	person	14,580			32,805			Lab-20
Unskilled Labour	= 3.9 person * 1.5	5.85	person	12,150			71,078			Lab-21
Miscellaneous cost	11%	0.11		123,728	0	0	13,610	0	0	
*Including "curing mat" etc										
Concrete Class C I	30Mpa	10.60	m3	85,497	0	0	906,267	0	0	02-222
Concrete pump car	90-110 m3/h, Boom type	1.50	hour	109,946	0		164,918	0		OPE-32
Subtotal		10.00	m3				1,208,523			
Per Unit Price		1.00	m3				120,852	0	0	

01- 176 Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Drainage Pipe Installation

Reference H25MLIT 880

Specification : PVC pipe

Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	= 0.3 person * 1.5	0.45	person	21,870.00			9,841.50			Lab-1
Skilled Labour	= 0.9 person * 1.5	1.35	person	14,580.00			19,683.00			Lab-20
Unskilled Labour	= 0.6 person * 1.5	0.90	person	12,150.00			10,935.00			Lab-21
PVC pipe		10.00	m	31,640.63	0.00	0	316,406.25	(0.00)	0.00	Mat-29
Subtotal		10.00	m				356,866			
Per Unit Price		1.00	m				35,687	0	0	

01- 177 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Bracket type support Reference H28MLIT 825

Specification : Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.4 person * 2.5	1.00	person	44,100.00			44,100.00			Lab-2
Form work	= 0.2 person * 2.5	0.50	person	18,270.00			9,135.00			Lab-18
Skilled Labour for Bridges	= 2.4 person * 2.5	6.00	person	29,400.30			176,401.80			Lab-8
Unskilled Labour	= 1.6 person * 2.5	4.00	person	12,150.00			48,600.00			Lab-21
Miscellaneous cost	25%	0.25		278,236.80	0.00	0	69,559.20	(0.00)	0.00	
*including "Wooden material, bolts, PC steels, anchors etc"										
Crawler crane	100t hang	0.30	day	604,856.00			181,456.80			OPE-42
Barge	1500t	0.30	day	2,498,798.08	0.00	0	749,639.42	(0.00)	0	Mac-d(10)
Subtotal		1.00	t				1,278,892			
Per Unit Price		1.00	t				1,278,892	0	0	

01- 178 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Support for overhang section Reference H28MLIT 825

Specification : Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 0.1 person * 2.5	0.25	person	44,100.00			11,025.00			Lab-2
Form work	= 0.1 person * 2.5	0.25	person	18,270.00			4,567.50			Lab-18
Skilled Labour for Bridges	= 0.5 person * 2.5	1.25	person	29,400.30			36,750.38			Lab-8
Unskilled Labour	= 0.1 person * 2.5	0.25	person	12,150.00			3,037.50			Lab-21
Miscellaneous cost	8%	0.08		55,380.38	0.00	0	4,430.43	(0.00)	0.00	
*including "Wooden material, bolts, PC steels, anchors etc"										
Crawler crane	100t hang	0.10	day	604,856.00			60,485.60			OPE-42
Barge	1500t	0.10	day	2,498,798.08	0.00	0	249,879.81	(0.00)	0	Mac-d(10)
Subtotal		10.00	m3				370,176			
Per Unit Price		1.00	m3				37,018	0	0	

01- 179 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item : Levelling & compacting soil Reference H28MLIT 37

Specification : Amount is over 10,000m3_Borrowed material Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Bulldozer	= 600 m3/day * 0.85 = 510 m3 / day	0.20	day	366,357.09			71,834.72			OPE-15
Unskilled labour		0.20	Person	12,150.00			2,430.00			Lab-21
Sandy soil		126.32	m3	12,713.30	0.00	0	1,605,890.53	(0.00)	0.00	Mat-49
	Loose soil rate L = 1.20									
	Compacted soil rate C = 0.95									
for compacted 100 m3, required amount is "L/C *100m3 =1.20/0.95 *100m3 = 126.32 m3"										
Subtotal		100.00	m3				1,680,155			
Per Unit Price		1.00	m3				16,802	0	0	

01- 180

Productivity correction coefficient: Asia

Labour coefficient none

Machine coefficient Simple

Item : Sand mat

Reference H9MLIT 99

Specification : Sand mat for preloading

Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Sand mat										
Spreading and leveling	16t ブルドーザ(Daily 560 * 0.85 = 476 m3)	0.21	day	366,357			76,965.77			OPE-52
Assistant Labour										
Unskilled Labour		0.20	perso	12,150			2,430.00			Lab-21
Sandy soil		138.89	m3	12,713	0	0	1,765,736.11	(0.00)	0.00	Mat-49
Subtotal		100.00	m3				1,845,132			
Per Unit Price		1.00	m3				18,451	0	0	

01- 190 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete for PC box in Yard Reference H28MLIT 818

Specification : Class A Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1 person * 2.5	1.25	person	44,100.00			55,125.00			Lab-2
Skilled Labour for Bridges	1 person * 2.5	1.25	person	29,400.30			36,750.38			Lab-8
Skilled Labour	5 person * 2.5	6.25	person	14,580.00			91,125.00			Lab-20
Unskilled Labour	7 person * 2.5	8.75	person	12,150.00			106,312.50			Lab-21
Concrete pump truck	Boom type (90～110m3/h)	1.80	hr	109,945.50	0.00		197,901.91	(0.00)		OPE-32
Miscellaneous cost	8%	0.08		183,000.38			14,640.03			
Concrete	Class A	10.60	m3	94,055.84	0.00	0	996,991.90	(0.00)	0.00	02-220
Subtotal		10.00	m3				1,498,847			
Per Unit Price		1.00	m3				149,885	0	0	

01- 192 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Re-bar work_SD345_D10-13 Reference H28MLIT 817

Specification : for PC box in yard construction Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5 person * 2.5	1.25	person	21,870.00			27,337.50			Lab-1
Rebar Worker	3.4 person * 2.5	8.50	person	18,270.00			155,295.00			Lab-15
Unskilled Labour	1.9 person * 2.5	4.75	person	12,150.00			57,712.50			Lab-21
Rough terrain crane	25t hang	0.20	day	297,147.20	0.00		59,429.44	(0.00)		OPE-27
Miscellaneous cost	2%	0.02		240,345.00			4,806.90			
Re-bar_SD345	D10-13, deformed bar	1.08	t	0.00	0.00	52,200	0.00	(0.00)	56,376.00	Mat-1
Subtotal		1.00	t				304,581		56,376	
Per Unit Price		1.00	t				304,581	0	56,376	

01- 193 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Re-bar work_SD345_D16-25 Reference H28MLIT 817

Specification : for PC box in yard construction Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.5 person * 2.5	1.25	person	21,870.00			27,337.50			Lab-1
Rebar Worker	3.4 person * 2.5	8.50	person	18,270.00			155,295.00			Lab-15
Unskilled Labour	1.9 person * 2.5	4.75	person	12,150.00			57,712.50			Lab-21
Rough terrain crane	25t hang	0.20	day	297,147.20	0.00		59,429.44	(0.00)		OPE-27
Miscellaneous cost	2%	0.02		240,345.00			4,806.90			
Re-bar_SD345	D16-25, deformed bar	1.08	t	40,449.97	0.00	72,534	43,685.97	(0.00)	78,336.69	Mat-2
Subtotal		1.00	t				348,267		78,337	
Per Unit Price		1.00	t				348,267	0	78,337	

01- 194 Productivity correction coefficient: Labour coefficient Machine coefficient

Item : Reference

Specification : Quantity· Unit :

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Subtotal		0.00	0							
Per Unit Price		1.00	0				0	0	0	

01- 198

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Fabrication_Railing on pier

Reference H28国基 PIV-7-1-1

Specification : P5(PKG1)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		4.20	nos			26,900			112,980	
G	0.560ton									
g	7.5person/ton									
a	0									
L	SS400_65*65*6	0.271	t	0.00	0.00	63,900	0.00	(0.00)	17,316.90	Mat-194
PL	SM400A_t=9mm	0.082	t	0.00	0.00	122,720	0.00	(0.00)	10,063.00	Mat-324
PL	SM400A_t=6mm	0.039	t	0.00	0.00	122,720	0.00	(0.00)	4,786.06	Mat-324
STK	STK400	0.168	t	0.00	0.00	99,900	0.00	(0.00)	16,783.20	Mat-152
U Bolt	SS400_25C	52.000	nos	400.24	0.00	0	20,812.48	(0.00)	0.00	Mat-452
U Bolt	SS400_15C	84.00	nos	346.15	0.00	0	29,077	0	0	Mat-453
ANC	Concrete anchor_SS400_M16*125	208.00	nos	2,217.55	0.00	0.00	461,250.40	(0.00)	0.00	Mat-454
Hot-Dip Galvanization	HDZ55	0.392	t			55,800			21,874	Mat-415
Hot-Dip Galvanization	HDZ35	0.271	t			54,000			14,634.00	Mat-414
Subtotal		1.00	LS				511,139		198,437	
Per Unit Price		1.00	LS				511,139	0	198,437	

01-	199	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Fabrication_Railing on pier　　Reference : H28国基 PIV-7-1-1

Specification : Cable stayed bridge(PKG1)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		15.27	nos			26,900			410,763	
G	2.036ton									
g	7.5person/ton									
a	0									
L	SS400_65*65*6	0.994	t	0.00	0.00	63,900	0.00	(0.00)	63,516.60	Mat-194
PL	SM400A_t=9mm	0.276	t	0.00	0.00	122,720	0.00	(0.00)	33,870.58	Mat-324
PL	SM400A_t=6mm	0.130	t	0.00	0.00	122,720	0.00	(0.00)	15,953.54	Mat-324
STK	STK400	0.64	t	0.00	0.00	99,900	0.00	(0.00)	63,536.40	Mat-152
U Bolt	SS400_25C	176.000	nos	400.24	0.00	0	70,442.24	(0.00)	0.00	Mat-452
U Bolt	SS400_15C	312.00	nos	346.15	0.00	0	107,999	0	0	Mat-453
ANC	Concrete anchor_SS400_M16*125	704.00	nos	2,217.55	0.00	0.00	1,561,155.20	(0.00)	0.00	Mat-454
Hot-Dip Galvanization	HDZ55	1.400	t			55,800			78,120	Mat-415
Hot-Dip Galvanization	HDZ35	0.974	t			54,000			52,596.00	Mat-414
Subtotal		1.00	LS				1,739,596		718,356	
Per Unit Price		1.00	LS				1,739,596	0	718,356	

01-	200	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Barrier fabrication　　Reference H28国基 PIV-7-1-1

Specification : Steel box girder(PKG2)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		1,618.89	nos			26,900			43,548,021	
G	168.634ton									
g	9.6person/ton									
a	0									
STKR	125*125*6	168.634	ton	0	0	81,000	0	0	13,659,347	Mat-253
SM400	250*250*19	12.342	ton			115,000			1,419,348	
SM400	125*125*19	10.873	ton			115,000			1,250,395	
M22*80		3.03	ton	0	0	288,633	0	0	875,136	
M16*45		0.370	ton	0	0	1,342,640	0	0	496,777	
Hot-Dip Galvanization	HDZ55	168.63	t			55,800			9,409,772	Mat-415
Subtotal		1.00	LS						70,658,796	
Per Unit Price		1.00	LS				0	0	70,658,796	

01-	201	Productivity correction coefficient: Asia	Labour coefficient	Simple	Machine coefficient	none

Item : Ladder in main tower — Reference : JICA study team

Specification : Cable stayed bridge — Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		28.80	nos			26,900			774,720	
G	3ton									
g	9.6person/ton									
a	0									
L	SS400_65*65*6		ton	0.00	0.00	63,900	0.00	(0.00)	0.00	Mat-194
FB	SS400_65*1270*6	3.000	ton	0.00	0.00	79,200	0.00	(0.00)	237,600.00	Mat-199
FB	SS400_65*1104*6		ton							
FB	SS400_65*545*6		ton							
Footway_Expanded metal	SM400		ton	0.00	0.00	713,333	0	0	0	Mat-413
Hot-Dip Galvanization	HDZ55	3.00	t			55,800			167,400	Mat-415
Subtotal		1.00	LS						1,179,720	
Per Unit Price		1.00	LS				0	0	1,179,720	

01-	202	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Inspection way　　Reference H28国基 PIV-7-1-1

Specification : Cable stayed bridge　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		364.80	nos			26,900			9,813,120	
G	38ton									
g	9.6person/ton									
a	0									
L	SS400_65*65*6	53.582	ton	0.00	0.00	63,900	0.00	(0.00)	3,423,915.36	Mat-194
FB	SS400_65*1270*6	6.419	ton	0.00	0.00	79,200	0.00	(0.00)	508,368.96	Mat-199
FB	SS400_65*1104*6		ton							
FB	SS400_65*545*6		ton							
Footway_Expanded metal	SM400	1.830	ton	0.00	0.00	713,333	0	0	1,305,083	Mat-413
Hot-Dip Galvanization	HDZ55	38.00	t			55,800			2,120,400	Mat-415
Subtotal		1.00	LS						17,170,888	
Per Unit Price		1.00	LS				0	0	17,170,888	

01-	203	Productivity correction coefficient: Asia	Labour coefficient	Simple	Machine coefficient	none		
Item :	Fairing				Reference	JICA study team		
Specification :	Cable stayed bridge				Quantity・Unit :	1	LS	

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		578.40	nos			26,900			15,558,960	
G	96ton									
g	6.0person/ton									
a	0									
L	SS400_65*65*6		ton	0	0	63,900	0	0	0	Mat-194
FB	SS400_65*1270*6	96.400	ton	0	0	79,200	0	0	7,634,880	Mat-199
FB	SS400_65*1104*6		ton							
FB	SS400_65*545*6		ton							
Footway_Expanded metal	SM400		ton	0	0	713,333	0	0	0	Mat-413
Subtotal		1.00	LS						23,193,840	
Per Unit Price		1.00	LS				0	0	23,193,840	

01-	204	Productivity correction coefficient: Asia	Labour coefficient	Simple	Machine coefficient	none

Item : Water pipe support — Reference : JICA study team

Specification : Cable stayed bridge — Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		61.50	nos			26,900			1,654,350	
G	20.5ton									
g	3.0person/ton									
a	0									
L	SS400_65*65*6		ton	0	0	63,900	0	0	0	Mat-194
FB	SS400_65*1270*6	20.500	ton	0	0	79,200	0	0	1,623,600	Mat-199
			ton							
			ton							
Hot-Dip Galvanization	HDZ55	20.50	t			55,800			1,143,900	Mat-415
Subtotal		1.00	LS						4,421,850	
Per Unit Price		1.00	LS				0	0	4,421,850	

01-	205	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Inspection way　　Reference H28国基 PIV-7-1-1

Specification : Steel box girder(PKG2)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		202.56	nos			26,900			5,448,864	
G	21ton									
g	9.6person/ton									
a	0									
L	SS400_65*65*6	29.768	ton	0.00	0.00	63,900	0.00	(0.00)	1,902,175.20	Mat-194
FB	SS400_65*1270*6	3.566	ton	0.00	0.00	79,200	0.00	(0.00)	282,427.20	Mat-199
FB	SS400_65*1104*6		ton							
FB	SS400_65*545*6		ton							
Footway_Expanded metal	SM400	1.016	ton	0.00	0.00	713,333	0	0	725,046	Mat-413
Hot-Dip Galvanization	HDZ55	21.10	t			55,800			1,177,380	Mat-415
Subtotal		1.00	LS						9,535,893	
Per Unit Price		1.00	LS				0	0	9,535,893	

01- 206

Productivity correction coefficient: Asia

Labour coefficient: Simple

Machine coefficient: none

Item : Water pipe support

Reference: JICA study team

Specification : Steel box girder(PKG2)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		20.57	nos			26,900			553,360	
G	6.9ton									
g	3.0person/ton									
a	0									
L	SS400_65*65*6		ton	0	0	63,900	0	0	0	Mat-194
FB	SS400_65*1270*6	6.857	ton	0	0	79,200	0	0	543,074	Mat-199
			ton							
			ton							
Hot-Dip Galvanization	HDZ55	6.86	t			55,800			382,621	Mat-415
Subtotal		1.00	LS						1,479,055	
Per Unit Price		1.00	LS				0	0	1,479,055	

01- 213

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Transportation in site

Reference

Specification : Special trailer 60 t

Quantity・Unit : 9 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Special trailer truck basic charge	60 t	9.00	month	13,594,952			122,354,567			Quatation
Subtotal		9.00	month				122,354,567			
Per Unit Price		1.00	month				13,594,952	0	0	

01- 215

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Concrete foundation of Manufacture equipment

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Yard Stabilization	t= 50cm	3,013.00	m3	11,783	0	0	35,500,703	0	0	02-60
	t= 100cm	9,167.00	m3	11,783	0	0	108,010,269	0	0	02-61
Potal Crane Railway Foundation	Concrete(including excavation, form, backfill)	205.00	m3	103,988	0	0	21,317,538	0	0	02-62
	Rail (30 kg / m)	400.00	m	23,441	0	0	9,376,560	0	0	02-63
Base concrete	For stock yard under planned alignment	420.00	m3	103,988	0	0	43,674,956	0	0	02-64
	For segment casting equipment	353.00	m3	103,988	0	0	36,707,760	0	0	02-65
	For re-bar assembling yard	108.00	m3	103,988	0	0	11,230,703	0	0	02-66
	For tower crane	36m3	m3	103,988	0	0	0	0	0	02-67
	*tower crane is substituted									
H-Beam 400x400x13x21		38.70	t	0	0	69,300	0	0	2,681,910	Mat-170
Depreciation	70%	(0.70)		0	0	2,681,910	0	0	(1,877,337)	
Subtotal		1.00	LS				265,818,489		804,573	
Per Unit Price		1.00	LS				265,818,489	0	804,573	

01- 216

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Equipment of segment fabrication yard

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Portal crane assembly and demolition	60 t	4.00	set	9,529,931	0	61,538	38,119,723	0	246,150	02-70
Equipment of Portal crane		4.00	set	0	118,381	0	0	473,525	0	02-71
Reinforcement assembly stand		4.00	set	3,362,219	0	330,542	13,448,877	0	1,322,169	02-72
Reinforcement assembly stand equipment	30 days * 7 months	210	day	0	0	24,744	0	0	5,196,240	02-73
Reinforcement assembly stand assembly		4.00	set	1,065,786	0	0	4,263,146	0	0	02-74
Reinforcement assembly stand instllation	16.82 t * 4 nos	67.28	t	115,257	0	0	7,754,510	0	0	02-75
Reinforcement assembly stand removal	16.82 t * 4 nos	67.28	t	43,723	0	0	2,941,692	0	0	02-76
Tower crane assembly and demolition	180 tm	1set	set	10,368,929	0	134,015	0	0	0	02-77
Equipment of Tower crane	180 tm	540days	day	0	0	138,448	0	0	0	02-78
Operation of tower crane	180 tm	450days	day	3,801,370	0	0	0	0	0	02-79
*tower crane is substituted										
Rough Terrain Crane	70 t	450.00	day	399,482			179,766,720			OPE-73
*instead of tower crane										
Subtotal		1.00	LS				246,294,667	473,525	6,764,559	
Per Unit Price		1.00	LS				246,294,667	473,525	6,764,559	

01- 217 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Short line equipment Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Short line equipment installation removal		132.57	t	579,267	0	9,354	76,793,397	0	1,240,020	02-80
Short line form equipment production costs										
Side form equipment	Side form main part	1	LS	0	0	160,051	0	0	160,051	02-81
	Side form support beam	1	LS	0	0	72,684	0	0	72,684	02-82
	Frame of Side form	1	LS	0	0	37,117	0	0	37,117	02-83
	Bottom form L=3.000	1	LS	0	0	88,417	0	0	88,417	02-84
Bottom form equipment	Bottom frame support beam (for L=3.000m)	1	LS	0	0	110,306	0	0	110,306	02-85
	Frame of bottom form (for L=3.0m)	1	LS	0	0	88,959	0	0	88,959	02-86
	Bottom form pillar (replacement type)	1	LS	0	0	178,848	0	0	178,848	02-87
	Bottom form rail material	1	LS	0	0	203,407	0	0	203,407	02-88
Inner form equipment	Inner form type-1	1	LS	0	0	275,427	0	0	275,427	02-89
	Inner form type-2	1	LS	0	0	354,683	0	0	354,683	02-90
	Inner form type-3	1	LS	0	0	273,116	0	0	273,116	02-91
	Inner form type-4	1	LS	0	0	274,636	0	0	274,636	02-92
	Inner form type-5	1	LS	0	0	249,259	0	0	249,259	02-93
	Inner form support beam	1	LS	0	0	129,308	0	0	129,308	02-94
	Inner form move cart	1	LS	0	0	63,366	0	0	63,366	02-95
	Inner form rail material	1	LS	0	0	76,577	0	0	76,577	02-96
	lateral beam parts of Inner form	1	LS	0	0	269,282	0	0	269,282	02-97
Edge form equipment	Edge form main part	1	LS	0	0	131,531	0	0	131,531	02-98
	Frame of edge form	1	LS	0	0	147,355	0	0	147,355	02-99
Short line hydraulic-machines cost of equipment	30 days * 7 months	210	day	0	0	20,032	0	0	4,206,636	02-100
Subtotal		1.00	LS				76,793,397		8,630,984	
Per Unit Price		1.00	LS				76,793,397	0	8,630,984	

01- 220 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fabrication of erection girder Reference

Specification : Including hydroric hanging equipment Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection Girder (Main)		1.00	LS	239,870,419	0	121,138,790	239,870,419	0	121,138,790	02-105
Erection Nose		1.00	LS	34,430,575	0	22,127,625	34,430,575	0	22,127,625	02-107
Girder Accessaries		1.00	LS	15,857,152	0	11,481,000	15,857,152	0	11,481,000	02-108
Segment Hoist Carriage		1.00	LS	0	0	40,080,000	0	0	40,080,000	02-109
Supporting Base		1.00	LS	0	0	54,196,640	0	0	54,196,640	02-110
Main Hoist		1.00	LS	0	0	35,410,000	0	0	35,410,000	02-111
Ancillary Equipment		1.00	LS	0	0	123,980,000	0	0	123,980,000	02-112
Depreciation	70%	(0.70)		290,158,146	0	408,414,055	(203,110,703)	0	(285,889,839)	
Subtotal		1.00	LS				87,047,444		122,524,217	
Per Unit Price		1.00	LS				87,047,444	0	122,524,217	

01- 222 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Bent foundation (on land) Reference JICA study team

Specification : Concrete foundation Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

01-	223	Productivity correction coefficient:	Labour coefficient	Technical	Machine coefficient	none
		Asia				

Item : Bent equipment instllation and demolition (on land) Reference H28MLIT 754

Specification : 2 time assembly Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity: m2/day	= T /(0.14 * T + 1.0)	6.7								
T : Total weight of bent		94.4	t							
Bent equipment hire	94.4 t * 90 day	8,496.00	t-day	8,474	0	0	71,991,346	0	0	Mac-d(49)
Scaffold for bent	2.0m < h <10m	0.04		71,991,346	0	0	2,879,654	0	0	
Foreman for Bridges *2 time	1.0per*(Total weight / daily productivity) * 2.5	70.45	person	44,100			3,106,746			Lab-2
Skilled Labour for Bridg *2 time	5.0per*(Total weight / daily productivity) * 2.5	352.24	person	29,400			10,355,927			Lab-8
Unskilled Labour *2 time	1.0per*(Total weight / daily productivity) * 2.5	70.45	person	12,150			855,940			Lab-21
Truck crane 1 st	25t hung (T/(0.14*T+1.0))	14.09	days	232,008	0		3,268,889	0		OPE-27
Truck crane 2 nd	25t hung (T/(0.14*T+1.0))	14.09	days	232,008	0		3,268,889	0		OPE-27
Subtotal		1.00	LS				95,727,391			
Per Unit Price		1.00	LS				95,727,391	0	0	

01- 224 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Erection girder assembly and demolition Reference H28MLIT 790

Specification : for Span by Sapn method Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1 person * 21 days * 2.5	52.50	person	44,100			2,315,250			Lab-2
Skilled Labour for Bridges	= 6 person * 21 days * 2.5	315.00	person	29,400			9,261,095			Lab-8
Unskilled Labour	= 3 person * 21 days * 2.5	157.50	person	12,150			1,913,625			Lab-21
Crawler crane 200t hang	10 days	12.00	day	2,814,363			33,772,355			OPE-46
Subtotal		1.00	set				47,262,325			
Per Unit Price		1.00	set				47,262,325	0	0	

01- 225 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Movement and instllation of SBS girder Reference H28MLIT 790

Specification : to next span Quantity・Unit : 1 time

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 2 person * 3.5 days * 2.5	17.50	person	44,100.00			771,750.00			Lab-2
Skilled Labour for Bridges	= 16 person * 3.5 days * 2.5	140.00	person	29,400.30			4,116,042.00			Lab-8
Unskilled Labour	= 9 person * 3.5 days * 2.5	78.75	person	12,150.00			956,812.50			Lab-21
Subtotal		1.00	time				5,844,605			
Per Unit Price		1.00	time				5,844,605	0	0	

01- 227 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Segment erection Reference

Specification : Quantity・Unit : 160 SEG

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Segment erection	Span by span method	160.00	SEG	269,101.80	0.00	4,945	43,056,288	0	791,181	02-140
Segment erection and adjustment		160.00	SEG	477,003.38	0.00	12,362	76,320,541	0	1,977,952	02-141
Adhesives coating	Both face coating	980.00	m2	18,667.58	0.00	3,750	18,294,228	0	3,675,000	02-142
Subtotal		160.00	SEG				137,671,057		6,444,133	
Per Unit Price		1.00	SEG				860,444	0	40,276	

01- 228

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Segment connection

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PC steel bar installation	(SBPR 930/1180 φ32mm)	2.218	t	1,618,094	0	325,314	3,588,933	0	721,546	02-150
PC steel bar fixation	(φ32)	480	nos	9,621	0	0	4,618,200	0	0	02-151
PC steel bar strain	(φ32)	480	nos	50,654	0	0	24,313,709	0	0	02-152
Subtotal		1.00	LS				32,520,842		721,546	
Per Unit Price		1.00	LS				32,520,842	0	721,546	

01- 229 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : External prestressing strands Reference H28BE_ 725

Specification : Type 19 S 15.2 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
External PC cable Installation	19S15.2	84.642	ton	621,526	0	710,730	52,607,201	0	60,157,609	02-160
Deviator pipe setting	Deviator pipe for 19S15.2_0.812m	240	nos	19,166	0	0	4,599,852	0	0	02-161
Deviator pipe setting	Deviator pipe for 19S15.2_1.624m	32	nos	37,958	0	0	1,214,660	0	0	02-166
Prestressing(End of girder)	19S15.2	24	cable	572,216	0	0	13,733,177	0	0	02-162
Prestressing(Inside of girder)	19S15.2	16	cable	628,697	0	0	10,059,157	0	0	02-163
Grouting for Anchor	19S15.2	96.00	nos	107,605	0	2,270	10,330,090	0	217,920	02-164
Depreciation cost for fixing equipment	for external cable	1.00	LS	0	0	2,782,046	0	0	2,782,046	02-165
Subtotal		1.00	LS				92,544,137		63,157,574	
Per Unit Price		1.00	LS				92,544,137	0	63,157,574	

01- 230 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands Reference H28MLIT 847

Specification : Type 12 S 15.2 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands	Installation_Main_12S15.2	4,461.5	m	14,011	0	4,093	62,509,407	0	18,261,589	02-170
Internal prestressing strands_12S15.2_one side p	Prestressing_Main_12S15.2	120	cable	389,531.52	0.00	0	46,743,782	0	0	02-171
Subtotal		1.00	LS				109,253,190		18,261,589	
Per Unit Price		1.00	LS				109,253,190	0	18,261,589	

01- 231 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands(for deck) Reference H28MLIT 847

Specification : Type 3 S 12.7 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for deck)	Installation_Crossbeam_3 S 12.7	784.70	m	4,693	0	768	3,682,377	0	603,011	02-175
Internal prestressing strands(for deck)	Presstressing_Crossbeam_3 S 12.7	80	Cable	122,066	0	0	9,765,286	0	0	02-176
Subtotal		1.00	LS				13,447,663		603,011	
Per Unit Price		1.00	LS				13,447,663	0	603,011	

01- 233 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands(for crossbeam) Reference H28MLIT 847

Specification : Type 4 S 15.2 (Horizontal) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for crossbeam)	Installation_Crossbeam_4 S 15.2 (Horizontal)	119.40	m	4,693	0	1,522	560,311	0	181,710	02-190
Internal prestressing strands(for crossbeam)	Prestressing_Crossbeam_4 S 15.2 (Horizontal)	20	Cable	292,166	0	0	5,843,321	0	0	02-191
Subtotal		1.00	LS				6,403,632		181,710	
Per Unit Price		1.00	LS				6,403,632	0	181,710	

01- 234 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Prestressing steel bar (for crossbeam) Reference H28MLIT 847

Specification : D32 (Vertical prestressing) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for crossbeam)	Installation_Crossbeam_D32 (Vertical prestressing)	1,234.10	m	28,272	0	0	34,889,883	0	0	02-195
Prestressing steel bar	Prestressing_Crossbeam_D32 (Vertical prestressing)	396	cable	28,003	0	7,380	11,089,287	0	2,922,480	02-196
Subtotal		1.00	LS				45,979,170		2,922,480	
Per Unit Price		1.00	LS				45,979,170	0	2,922,480	

01- 236

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : 欠番

Reference

Specification :

Quantity・Unit :

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Miscellaneous cost	12%	0.12		0.00	0.00	0	0.00	(0.00)	0.00	
Subtotal		0.00	0							
Per Unit Price		1.00	0				0	0	0	

01-	237	Productivity correction coefficient:	Labour coefficient	Technical	Machine coefficient	none
		Asia				

Item : Bearing setting　　Reference H28MLIT 807

Specification : Rubber Bearing_Separat perform type　　Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	Daily setting Number = 3	3								
Foreman for Bridges	= 10 / 3 * 1 * 2.5	8	person	44,100.00			367,500.00			Lab-2
Skilled Labour for Bridges	= 10 / 3 * 2 * 2.5	17	person	29,400.30			490,005.00			Lab-8
Unskilled Labour	= 10 / 3 * 2 * 2.5	17	person	12,150.00			202,500.00			Lab-21
Crawler crane	50 ~ 55t hang	3.33	day	297,147	0		990,491	0		OPE-26
Barge	800t	3.33	day	1,388,221	0	0	4,627,404	0	0	Mac-d(20)
Tag boat	800PS_70GT	1.11	day	1,119,130			1,243,478			OPE-66
Subtotal		10.00	nos				7,921,378			
Per Unit Price		1.00	nos				792,138	0	0	

01- 238

Productivity correction coefficient: Asia

Labour coefficient

Technical

Machine coefficient none

Item : Bearing setting

Reference H28MLIT 807

Specification : Rubber Bearing_Separat perform type

PKG2用_同様か？

Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	Daily setting Number = 3	3								Lab-**
Foreman for Bridges	= 10 / 3 * 1 * 2.5	8	person	44,100.00			367,500.00			Lab-2
Skilled Labour for Bridges	= 10 / 3 * 2 * 2.5	17	person	29,400.30			490,005.00			Lab-8
Unskilled Labour	= 10 / 3 * 2 * 2.5	17	person	12,150.00			202,500.00			Lab-21
										Mat-**
Rubber Bearing	1000 t	10	nos							
Subtotal		10.00	nos				1,060,005			
Per Unit Price		1.00	nos				106,001	0	0	

01- 239

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : 欠番

Reference

Specification :

Quantity・Unit :

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Subtotal		0.00	0							
Per Unit Price		1.00	0				0	0	0	

01- 240

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : 欠番

Reference

Specification :

Quantity・Unit :

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Subtotal		0.00	0							
Per Unit Price		1.00	0				0	0	0	

01- 241 Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : Modular type

Reference H28MLIT 862

Specification : for PC box_A1

Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1 person * 2.5	2.5	person	44,100.00			110,250.00			Lab-2
Skilled Labour for Bridges	= 4 person * 2.5	10.0	person	29,400.30			294,003.00			Lab-8
Unskilled Labour	= 1 person * 2.5	2.5	person	12,150.00			30,375.00			Lab-21
Crawler crane	50 ~ 55t hang	1.00	day	297,147	0		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221	0	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130			223,826			OPE-66
Expansion Joint	A1	20.40	m	0	0	1,228,676	0	0	25,065,000	Mat-404
Subtotal		1.00	nos				2,343,822		25,065,000	
Per Unit Price		1.00	nos				2,343,822	0	25,065,000	

01- 242 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Modular type Reference H28MLIT 862

Specification : for PC box_A2 Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	= 1 person * 2.5	2.5	person	44,100.00			110,250.00			Lab-2
Skilled Labour for Bridges	= 4 person * 2.5	10.0	person	29,400.30			294,003.00			Lab-8
Unskilled Labour	= 1 person * 2.5	2.5	person	12,150.00			30,375.00			Lab-21
Crawler crane	50 ~ 55t hang	1.00	day	297,147	0		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221	0	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130			223,826			OPE-66
Expansion Joint	A2	20.40	m	0	0	1,228,676	0	0	25,065,000	Mat-405
Subtotal		1.00	nos				2,343,822		25,065,000	
Per Unit Price		1.00	nos				2,343,822	0	25,065,000	

01- 243 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : External prestressing strands_PKG2 Reference H28BE_ 725

Specification : Type 19 S 15.2 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
External PC cable Installation	19S15.2	112.000	ton	621,526	0	710,730	69,610,909	0	79,601,760	02-160
Deviator pipe setting	Deviator pipe for 19S15.2_0.812m	288	nos	19,166	0	0	5,519,822	0	0	02-161
Deviator pipe setting	Deviator pipe for 19S15.2_1.624m	40	nos	37,958	0	0	1,518,326	0	0	02-166
Prestressing(End of girder)	19S15.2	28	cable	572,216	0	0	16,022,040	0	0	02-162
Prestressing(Inside of girder)	19S15.2	20	cable	628,697	0	0	12,573,947	0	0	02-163
Grouting for Anchor	19S15.2	112.00	nos	107,605	0	2,270	12,051,771	0	254,240	02-164
Depreciation cost for fixing equipment		1.00	LS	0	0	2,782,046	0	0	2,782,046	02-165
Subtotal		1.00	LS				117,296,814		82,638,046	
Per Unit Price		1.00	LS				117,296,814	0	82,638,046	

01- 244 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands_PKG2 Reference H28MLIT 847

Specification : Type 12 S 15.2 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands	Installation_Main_12S15.2	5,331.7	m	14,011	0	4,093	74,701,649	0	21,823,448	02-170
Internal prestressing strands_12S15.2_one side p	Prestressing_Main_12S15.2	144	cable	389,531.52	0.00	0	56,092,539	0	0	02-171
Subtotal		1.00	LS				130,794,188		21,823,448	
Per Unit Price		1.00	LS				130,794,188	0	21,823,448	

01- 245 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands(for deck)_PKG2 Reference H28MLIT 847

Specification : Type 3 S 12.7 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for deck)	Installation_Crossbeam_3 S 12.7	922.50	m	4,693	0	768	4,329,034	0	708,904	02-175
Internal prestressing strands(for deck)	Presstressing_Crossbeam_3 S 12.7	94	Cable	122,066	0	0	11,474,211	0	0	02-176
Subtotal		1.00	LS				15,803,245		708,904	
Per Unit Price		1.00	LS				15,803,245	0	708,904	

01- 247 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands(for crossbeam)_PKG2 Reference H28MLIT 847

Specification : Type 4 S 15.2 (Horizontal) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for crossbeam)	Installation_Crossbeam_4 S 15.2 (Horizontal)	119.40	m	4,693	0	1,522	560,311	0	181,710	02-190
Internal prestressing strands(for crossbeam)	Prestressing_Crossbeam_4 S 15.2 (Horizontal)	20	Cable	292,166	0	0	5,843,321	0	0	02-191
Subtotal		1.00	LS				6,403,632		181,710	
Per Unit Price		1.00	LS				6,403,632	0	181,710	

01- 248 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Prestressing steel bar (for crossbeam)_PKG2 Reference H28MLIT 847

Specification : D32 (Vertical prestressing) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Internal prestressing strands(for crossbeam)	Installation_Crossbeam_D32 (Vertical prestressing)	1,469.20	m	28,272	0	0	41,536,517	0	0	02-195
Prestressing steel bar	Prestressing_Crossbeam_D32 (Vertical prestressing)	466	cable	28,003	0	7,380	13,049,515	0	3,439,080	02-196
Subtotal		1.00	LS				54,586,032		3,439,080	
Per Unit Price		1.00	LS				54,586,032	0	3,439,080	

01- 250 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Bracket support main part Reference H28MLIT 825

Specification : Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.4 person * 2.5	1.00	person	44,100.00			44,100.00			Lab-2
Form work	0.2 person * 2.5	0.50	person	18,270.00			9,135.00			Lab-18
Skilled Labour for Bridges	2.4 person * 2.5	6.00	person	29,400.30			176,401.80			Lab-8
Unskilled Labour	1.6 person * 2.5	4.00	person	12,150.00			48,600.00			Lab-21
Miscellaneous cost	25%	0.25		278,236.80	0.00	0	69,559.20	(0.00)	0.00	
*Material to be utilized from cooping support										
Truck crane	hydraulic 25t hangs	0.30	day	232,008.00	0.00		69,602.40	(0.00)		OPE-27
Subtotal		1.00	t				417,398			
Per Unit Price		1.00	t				417,398	0	0	

01- 251 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Segment Support on a bracket Reference H28MLIT 825

Specification : Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.1 person * 2.5	0.25	person	44,100.00			11,025.00			Lab-2
Form work	0.1 person * 2.5	0.25	person	18,270.00			4,567.50			Lab-18
Skilled Labour for Bridges	0.5 person * 2.5	1.25	person	29,400.30			36,750.38			Lab-8
Unskilled Labour	0.5 person * 2.5	1.25	person	12,150.00			15,187.50			Lab-21
Miscellaneous cost	8%	0.08		67,530.38	0.00	0	5,402.43	(0.00)	0.00	
Truck crane	hydraulic 25t hangs	0.30	day	232,008.00	0.00		69,602.40	(0.00)		OPE-27
Subtotal		10.00	m3				142,535			
Per Unit Price		1.00	m3				14,254	0	0	

01- 252 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC steel bar (Vertical) Reference H28MLIT 828

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 1 pier

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PC bar installation	φ32 (2.5m) and anchorage	0.133	t	1,502,090	0	325,314	199,778	0	43,267	02-200
PC bar connection	φ32 (2.5m) and anchorage	8.00	nos	18,158	0	1,935	145,263	0	15,480	02-201
PC bar anchor setting	φ32 (2.5m) and anchorage	8.00	nos	9,621	0	3,690	76,970	0	29,520	02-202
PC bar prestressing	φ32 (2.5m) and anchorage	8.00	nos	50,654	0	3,105	405,228	0	24,840	02-203
PC bar_Stress release	φ32 (2.5m) and anchorage	8.00	nos	34,020	0	0	272,162	0	0	02-204
* (1.2+1.3) m/nos * 6.65 kg/ m * 2 nos/SEG * 4 SEG on pier										
Subtotal		1.00	pier				1,099,402		113,107	
Per Unit Price		1.00	pier				1,099,402	0	113,107	

01- 253 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC steel bar(Horizontal for segment connection) Reference H28MLIT 828, 826

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 1 pier

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PC bar installation	φ32 (6.0m) and anchorage	0.479	t	1,502,090	0	325,314	719,201	0	155,760	02-210
PC bar connection	φ32 (6.0m) and anchorage	12.00	nos	18,158	0	1,935	217,895	0	23,220	02-211
PC bar anchor setting	φ32 (6.0m) and anchorage	12.00	nos	9,621	0	3,690	115,455	0	44,280	02-212
PC bar prestressing	φ32 (6.0m) and anchorage	12.00	nos	50,654	0	3,105	607,843	0	37,260	02-213
PC bar_Stress release	φ32 (6.0m) and anchorage	12.00	nos	34,020	0	0	408,243	0	0	02-214
* (3+3) m/nos * 6.65 kg/ m * 6 nos/SEG * 2 SEG on pier										
Subtotal		1.00	pier				2,068,636		260,520	
Per Unit Price		1.00	pier				2,068,636	0	260,520	

01- 257 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Form fabrication, installation, and removal Reference H28MLIT 827

Specification : Quantity・Unit : 10 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labor organizer	0.4 person * 2.5	1.00	person	21,870.00			21,870.00			Lab-1
Form worker	3.2 person * 2.5	8.00	person	18,270.00			146,160.00			Lab-18
Unskilled Labour	1.6 person * 2.5	4.00	person	12,150.00			48,600.00			Lab-21
Miscellaneous cost	13%	0.13		216,630.00	0.00	0	28,161.90	(0.00)	0.00	
Truck crane	hydraulic 25t hangs	0.10	day	232,008.00	0.00		23,200.80	(0.00)		OPE-27
Subtotal		10.00	m2				267,993			
Per Unit Price		1.00	m2				26,799	0	0	

01- 259 Productivity correction coefficient: Asia Labour coefficient General Machine coefficient none

Item: Concrete (Cast-in-place) Reference H24MLIT 288

Specification: 50 Mpa Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Labour										
Foreman	0.14 (person) x2.5	0.35	person	21,870.00			7,654.50			Lab-1
Skilled Labour	0.4 (person) x2.5	1.00	person	14,580.00			14,580.00			Lab-20
Unskilled Labour	0.54 (person) x2.5	1.35	person	12,150.00			16,402.50			Lab-21
Machine										
Concrete pump car	1.03 (hr)	1.03	hr	109,945.50			113,243.87			OPE-32
90-110m3/hr										
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	151,880.87		0	1,518.81		0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class A	10.45	m3	94,055.84	0.00	0	982,883.53	0.00	0	02-220
Curing	Ordinal curing (Reinforced concrete)	10.00	m3	387.83			3,878.30			01-02
*Daily productivity = 320 m3	0.031day for 10 m3									
Subtotal		10.00	m3				1,140,161.51			
Per Unit Price		1.00	m3				114,016.15	0.00	0	

01- 260

Productivity correction coefficient: Asia

Labour coefficient: Simple

Machine coefficient: none

Item :

Reference

Specification :

Quantity・Unit :

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Subtotal		0.00	0							
Per Unit Price		1.00	0				0	0	0	

01- 261

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Box Culvert fabrication

Reference

Specification : 1000*1000

Quantity・Unit : 1 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	1.60	m3	99,456.29	0.00	0	159,130.06	(0.00)	0	00-51
Form work	for ordinal concrete_with&without rebar	5.97	m2	8,784.71	0.00	0	52,409.58	(0.00)	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	1.80	m3	917.60	0.00	0	1,651.68	(0.00)	0	01-17
Rebar work_SD345	Arranging D13	0.122	ton	126,764	0.0	78,422	15,459	0.00	9,564	00-79
Rebar work_SD345	Assembling D13	0.122	ton	154,137	0.0	0	18,797	0.00	0	00-82
Subtotal		1.00	m				247,447		9,564	
Per Unit Price		1.00	m				247,447	0	9,564	

01- 262

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Box Culvert fabrication

Reference

Specification : 2000*1500

Quantity・Unit : 1 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete work	24N/mm2	2.50	m3	99,456.29	0.00	0	248,641	0	0	00-51
Form work	for ordinal concrete_with&without rebar	8.97	m2	8,784.71	0.00	0	78,764	0	0	01-22
Levelling & compacting soil	for Embankment/Filled up/Foundation, W<1.0m,Borrow	0.56	m3	917.60	0.00	0	514	0	0	01-17
Rebar work_SD345	Arranging D13	0.118	ton	126,764	0.0	78,422	14,958	0	9,254	00-79
Rebar work_SD345	Assembling D13	0.118	ton	154,137	0.0	0	18,188	0	0	00-82
Rebar work_SD345	Arranging D16-D25	0.103	ton	114,348	0.0	81,271	11,778	0	8,371	00-80
Rebar work_SD345	Assembling D16-D25	0.103	nos	128,135	0.0	0	13,198	0	0	00-83
Rebar work_SD345	Arranging D29-D32	0.000	ton	80,841	0.0	83,080	0	0	0	00-81
Rebar work_SD345	Assembling D29-D32	0.000	ton	78,633	0.0	0	0	0	0	00-84
Subtotal		1.00	m				386,040		17,625	
Per Unit Price		1.00	m				386,040	0	17,625	

01-	263	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Setting of Flap Gate　　Reference : JICA study team

Specification : 1000*1000　　Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		2.00	person	21,870			43,740			Lab-1
Skilled Labour		6.00	person	14,580			87,480			Lab-20
Unskilled Labour		10.00	person	12,150			121,500			Lab-21
Rough terrain crane	25t hang	2.00	day	297,147	0		594,294	0		OPE-27
Miscellaneous cost	10%	0.10		252,720	0	0	25,272	0	0	
Flap Gate	1000*1000	1.00	nos		0	5,392,800		0	5,392,800	Mat-314
Subtotal		1.00	set				872,286		5,392,800	
Per Unit Price		1.00	set				872,286	0	5,392,800	

01- 264 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Setting of Flap Gate Reference JICA study team

Specification : 1500*2000 Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman		3.00	person	21,870			65,610			Lab-1
Skilled Labour		9.00	person	14,580			131,220			Lab-20
Unskilled Labour		12.00	person	12,150			145,800			Lab-21
Tag boat	25t hang	3.00	day	297,147	0		891,442	0		OPE-27
Miscellaneous cost	10%	0.10		342,630	0	0	34,263	0	0	
Flap Gate	1500*2000	1.00	nos		0	7,704,000		0	7,704,000	Mat-315
Subtotal		1.00	set				1,268,335		7,704,000	
Per Unit Price		1.00	set				1,268,335	0	7,704,000	

01- 266 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item: Concreting_on_river Reference JICA study team

Specification: Class D Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity		320.00	m3/day							
Labour										
Foreman	0.14*1.5	0.21	person	21,870.00			4,592.70			Lab-1
Skilled Labour	0.4*1.5	0.60	person	14,580.00			8,748.00			Lab-20
Unskilled Labour	0.54*1.5	0.81	person	12,150.00			9,841.50			Lab-21
Machine										
Crawler crane	100t hang	0.03	day	604,856.00			18,901.75			OPE-42
Barge	1500t	0.03	day	2,498,798.08	0.00	0	78,087.44	(0.00)	0	Mac-d(10)
Concrete bucket	5.0 m3 *2 nos	0.06	day	109,945.50	0.00		6,871.59	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 6 nos	0.19	day	171,633.30			32,181.24			OPE-71
Barge 2 nos	500t	0.06	day	969,771.63	0.00	0	60,610.73	(0.00)	0	Mac-d(21)
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	42,083.95	0.00	0	420.84	0.00	0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class D	10.45	m3	80,122.96	0.00	0	837,285	0	0	02-224
Subtotal		10.00	m3				1,057,541			
Per Unit Price		1.00	m3				105,754	0	0	

日当たり施工量確認必要

01- 267 Productivity correction coefficient: Labour coefficient Machine coefficient

Asia

Item: Concreting_on_river Reference JICA study team

Specification: Class E Quantity・Unit: 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity		320.00	m3/day							
Labour										
Foreman	0.14*1.5	0.21	person	21,870.00			4,592.70			Lab-1
Skilled Labour	0.4*1.5	0.60	person	14,580.00			8,748.00			Lab-20
Unskilled Labour	0.54*1.5	0.81	person	12,150.00			9,841.50			Lab-21
Machine										
Crawler crane	100t hang	0.03	day	604,856.00			18,901.75			OPE-42
Barge	1500t	0.03	day	2,498,798.08	0.00	0	78,087.44	(0.00)	0	Mac-d(10)
Concrete bucket	5.0 m3 *2 nos	0.06	day	109,945.50	0.00		6,871.59	(0.00)		OPE-32
Concrete mixer truck	5.0 m3 * 6 nos	0.19	day	171,633.30			32,181.24			OPE-71
Barge 2 nos	500t	0.06	day	969,771.63	0.00	0	60,610.73	(0.00)	0	Mac-d(21)
Miscellaneous cost										
Subtotal of Labour cost, machine depreciation and operation cost 1.0% is counted		0.01	-	42,083.95	0.00	0	420.84	0.00	0	
Miscellaneous cost is for vibrators and electricity										
Material										
Concrete	Class E	10.45	m3	74,380.08	0.00	0.00	777,272	0	0	02-224
Subtotal		10.00	m3				997,528			
Per Unit Price		1.00	m3				99,753	0	0	

01- 268 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200 Reference H28MLIT 197

Specification : PKG2_P21_22(Exterior)_from Jetty Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
1 party										
a= 1.00 b= 1.15	Ta = 12.5	19.167	day/10nos	(Daily productivity * 75%)						
Foreman	1 person* total days * party	19.167	person	21,870.00			419,175.00			Lab-1
Scaffolder	2 person* total days * party	38.333	person	18,270.00			700,350.00			Lab-6
Unskilled Labour	1 person* total days * party	19.167	person	12,150.00			232,875.00			Lab-21
Welder	2 person* total days * party	38.333	person	19,440.00			745,200.00			Lab-17
Vibratory Hammer224kW		19.167	day	204,309.00	864.29		3,915,922.50	(16,565.52)		OPE-59
Crawler crane	200t hang	19.167	day	2,814,363			53,941,956			OPE-46
Hydraulic hammer	181kw	9.583	day	97,713.00	1,313.59		936,416.25	12,588.59		OPE-60
Transportation 1200t(10 nos/time)	1 nos		day							Mac-d(10)
Tag boat 1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time		day							OPE-65
Transportation 300t(10 nos/2 time)	1 nos		day							Mac-d(22)
Tag boat 350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time		day							OPE-68
Miscellaneous cost	31%	0.31		2,097,600.00	0.00	0	650,256.00	0.00	0	
Subtotal		10.00	nos				61,542,151	29,154		
Per Unit Price		1.00	nos				6,154,215	2,915	0	

counted depending on duration on "00-280"

01- 269 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200 Reference H28MLIT 197

Specification : PKG2_P21_22(Bulkhead)_from Jetty Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
1 party										
a= 1.00 b= 1.15	Ta = 12.5	19.167	day/10nos	(Daily productivity * 75%)						
Foreman	1 person* total days * party	19.167	person	21,870.00			419,175.00			Lab-1
Scaffolder	2 person* total days * party	38.333	person	18,270.00			700,350.00			Lab-6
Unskilled Labour	1 person* total days * party	19.167	person	12,150.00			232,875.00			Lab-21
Welder	2 person* total days * party	38.333	person	19,440.00			745,200.00			Lab-17
Vibratory Hammer224kW		19.167	day	204,309.00	864.29		3,915,922.50	(16,565.52)		OPE-59
Crawler crane	200t hang	19.167	day	2,814,363			53,941,956			OPE-46
Hydraulic hammer	181kw	9.583	day	97,713.00	1,313.59		936,416.25	12,588.59		OPE-60
Transportation 1200t(10 nos/time)	1 nos		day							Mac-d(10)
Tag boat 1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time		day							OPE-65
Transportation 300t(10 nos/2 time)	1 nos		day							Mac-d(22)
Tag boat 350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time		day							OPE-68
Miscellaneous cost	31%	0.31		2,097,600.00	0.00	0	650,256.00	0.00	0	
Subtotal		10.00	nos				61,542,151	29,154		
Per Unit Price		1.00	nos				6,154,215	2,915	0	

counted depending on duration on "00-280"

01- 270 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200 Reference H28MLIT 197

Specification : PKG2_P14_15_16_17_18_19_20(Exterior)_on Barge Quantity・Unit : 20 nos

Item		Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
2 party											
a= 1.00	b= 1.15	Ta = 12.5	19.167	day/20nos	(Daily productivity * 75%)						
Foreman		1 person* total days * party	38.333	person	21,870.00			838,350.00			Lab-1
Scaffolder		2 person* total days * party	76.667	person	18,270			1,400,700			Lab-6
Unskilled Labour		1 person* total days * party	38.333	person	12,150			465,750			Lab-21
Welder		2 person* total days * party	76.667	person	19,440			1,490,400			Lab-17
Crawler crane		200t hang	19.167	day	2,814,363			53,941,956			OPE-46
Vibratory Hammer224kW			19.167	day	204,309	864		3,915,923	16,566		OPE-59
Barge		2000t	19.167	day	3,192,909	0	0	61,197,416	0	0	Mac-d(19)
Hydraulic hammer		181kw	19.167	day	97,713	1,314		1,872,833	25,177		OPE-60
Crawler crane		200t hang	19.167	day	2,814,363			53,941,956			OPE-46
Vibratory Hammer224kW			19.167	day	204,309	864		3,915,923	16,566		OPE-59
Barge		2000t	19.167	day	3,192,909	0	0	61,197,416	0	0	Mac-d(19)
Tag boat	2500PS_220GT	0.346 hr/day / (8 hr/day) * 2 time	0.173	day	3,201,024			553,936			OPE-62
Transportation	1200t(10 nos/time)	2 nos		day							Mac-d(10)
Tag boat	1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time		day							OPE-65
Transportation	300t(10 nos/2 time)	2 nos		day							Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time		day							OPE-68
Miscellaneous cost		31%	0.31		4,195,200	0	0	1,300,512	0	0	
Subtotal			20.00	nos				246,033,069	58,308		
Per Unit Price			1.00	nos				12,301,653	2,915	0	

counted depending on duration on "00-280"

01- 271 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length48-64m)_φ1200 Reference H28MLIT 197

Specification : PKG2_P14_15_16_17_18_19_20(Bulkhead)_on Barge Quantity・Unit : 10 nos

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
1 party											
a= 1.00	b= 1.15	Ta = 12.5	19.167	day/10nos	(Daily productivity * 75%)						
Foreman		1 person* total days * party	19.167	person	21,870.00			419,175.00			Lab-1
Scaffolder		2 person* total days * party	38.333	person	18,270.00			700,350.00			Lab-6
Unskilled Labour		1 person* total days * party	19.167	person	12,150.00			232,875.00			Lab-21
Welder		2 person* total days * party	38.333	person	19,440.00			745,200.00			Lab-17
Crawler crane		200t hang	19.167	day	2,814,363			53,941,956			OPE-46
Vibratory Hammer224kW			19.167	day	204,309.00	864.29		3,915,922.50	(16,565.52)		OPE-59
Barge		2000t	19.167	day	3,192,909	0	0	61,197,416	0	0	Mac-d(19)
Hydraulic hammer		181kw	9.583	day	97,713.00	1,313.59		936,416.25	12,588.59		OPE-60
Tag boat	2500PS_220GT	0.346 hr/day / (8 hr/day) * 2 time	0.043	day	3,201,024			138,484			OPE-62
Transportation	1200t(10 nos/time)	1 nos		day	counted depending on duration on "00-280"						Mac-d(10)
Tag boat	1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time		day							OPE-65
Transportation	300t(10 nos/2 time)	1 nos		day							Mac-d(22)
Tag boat	350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time		day							OPE-68
Miscellaneous cost		31%	0.31		2,097,600.00	0.00	0	650,256.00	0.00	0	
Subtotal			10.00	nos				122,878,051	29,154		
Per Unit Price			1.00	nos				12,287,805	2,915	0	

01- 272

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(Steel Plate)

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PL	SM570 16< t ≦40	980.201	t	0	0	183,730	0	0	180,092,002	Mat-316
PL	SM570 t ≦16	1,030.537	t	0	0	145,800	0	0	150,252,273	Mat-449
PL	SM570-H	215.328	t	0	0	147,600	0	0	31,782,457	Mat-450
PL	SM490YB t ≦25	1,300.059	t	0	0	140,570	0	0	182,749,410	Mat-319
PL	SM490YB 25 < t ≦38	152.566	t	0	0	138,172	0	0	21,080,275	Mat-320
PL	SM490YB 38 < t ≦50		t	0	0	141,103	0	0	0	Mat-321
PL	SM490YA t ≦25	3,472.048	t	0	0	136,573	0	0	474,188,679	Mat-322
PL	SM490C 50 < t ≦100		t	0	0	146,964	0	0	0	Mat-323
PL	SM400A t ≦38	1,882.494	t	0	0	122,720	0	0	231,018,679	Mat-324
PL	SS400		t	0	0	117,125	0	0	0	Mat-325
Scrap	Heavy H1	5,498.490	t			21,500			(118,217,524.25)	Mat-147
	*Original weight	7,854.985	t							
Indirect matrial		7,854.985	t			12,000			94,259,820.00	Mat-139
Hot-Dip Galvanization	HDZ55		t			55,800			0	Mat-415
Miscellaneous cost										
Subtotal		1.00	LS						1,247,206,070	
Per Unit Price		1.00	LS				0	0	1,247,206,070	

Q*1.15

01- 273

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(Shapes)

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item	Specification	Q*1.12	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
BULB	SM490YA		248.056	t	0	0	197,472	0	0	48,984,291	Mat-451
U	SM490YA 320X240X8		881.664	t	0	0	279,919	0	0	246,794,417	Mat-330
Scrap	Heavy H1		706.075	t			21,500			(15,180,618.95)	Mat-147
	*Original weight		1,008.679	t							
Indirect matrial			1,008.679	t			12,000			12,104,148.00	Mat-139
Subtotal			1.00	LS						292,702,237	
Per Unit Price			1.00	LS				0	0	292,702,237	

01- 274

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(HTB)

Reference

Specification : Main girder

Quantity・Unit : 1 LS

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
TCB		S10T M24		t	0	0	262,640	0	0	0	Mat-342
TCB		S10T M22	128.66	t	0	0	249,196	0	0	32,062,074	Mat-343
TCB		S10T M16		t	0	0	270,000	0	0	0	Mat-344
HTB		F10T M22		t	0	0	288,633	0	0	0	Mat-345
TCB	S10T	M24*135	223,400	nos	0			0			Mat-229
		M22*110		nos	0			0			Mat-228
		M22*95		nos	0			0			Mat-227
		M22*85		nos	0			0			Mat-226
		M22*80		nos	0			0			Mat-225
		M22*75		nos	0			0			Mat-224
		M22*70		nos	0			0			Mat-223
		M22*65		nos	0			0			Mat-222
		M16*85		nos	0			0			Mat-221
HTB	F10T	M22*80		nos							
		M22*75		nos							
Miscellaneous cost											
Subtotal			1.00	LS						32,062,074	
Per Unit Price			1.00	LS				0	0	32,062,074	

01-	275	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Fabrication cost of direct labour cost　　Reference H28国基 PIV-7-1-1

Specification : Main girder　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
No of processing		23,367.97	nos			26,900			628,598,393	
Y={(Y1+Y2)*K+Y3+Y4}*(1+a)*(1+b)*(1+c)*(1+d)+Y5, (*round "No" off to two decimal places)										
(Y1) Total No. of process		78,561.30	nos							
(Y2) No. of welding		2,055.12	nos							
(Y3) No. of Pre-assembling in factory		4,625.16	nos							
Miscellaneous cost										
Subtotal		1.00	LS						628,598,393	
Per Unit Price		1.00	LS				0	0	628,598,393	

01- 276

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bent instllation and removal

Reference

Specification : Steel box girder

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	459.27	t	448,742	0	0	206,093,872	0	0	00-24
Temporary Jetty	Remove superstructure	459.27	t	245,450	0	0	112,727,936	0	0	00-149
*65.71 ton * 7 times										
Steel Pipe driving_(Driving Length16-32m)_φ1200	for bent piles	224	nos	3,728,939	444	0	835,282,314	99,434	0	02-245
Demobilization	30%	0.3		835,282,314	99,434	0	250,584,694	29,830	0	
Bent equipment except for piles_PKG2	Material	1	LS	0	0	26,514,508	0	0	26,514,508	02-247
Subtotal		1.00	LS				1,404,688,816	129,264	26,514,508	
Per Unit Price		1.00	LS				1,404,688,816	129,264	26,514,508	

01- 277 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding Reference H28MLIT 746-748

Specification : Steel box girder Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main & Intermediate scaffolding	(Erection:8.0)+(Painting:1.0) month	9.00	month	0	0	5,280,000	0	0	47,520,000	02-261
Additional work space scaffolding	(Erection:8.0)+(Painting:1.0) month	9.00	month	0	0	95,969	0	0	863,721	02-262
Safety passage	(Erection:8.0)+(Painting:1.0) month	9.00	month	0	0	2,640,000	0	0	23,760,000	02-263
Additional support for steeldeck	(Erection:8.0)+(Painting:1.0) month	9.00	month	0	0	2,640,000	0	0	23,760,000	02-264
Protective shelf for hanging scaffold	(Erection:8.0)+(Painting:1.0) month	9.00	month	0	0	2,640,000	0	0	23,760,000	02-265
Subtotal		1.00	LS						119,663,721	
Per Unit Price		1.00	LS				0	0	119,663,721	

01- 278 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fall prevention / protection and Ascending ladder Reference H28MLIT 746-748

Specification : Steel box girder Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fall prevention / protection	(Erection:8.0)+(Painting:1.0) month	9.00	month	0.00	0.00	2,288,000	0	0	20,592,000	02-266
Scaffolding for ascending piers		9.00	month	0.00	0.00	400,880	0	0	3,607,920	02-267
Subtotal		1.00	LS						24,199,920	
Per Unit Price		1.00	LS				0	0	24,199,920	

01- 279 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reassembling in site Reference H28MLIT P751

Specification : Steel box girder Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =weight of re-assembling / (0.02 * (weight of re-assembling+20))		49.89	t							
Foreman for Bridges	= 1.0 person / daily productivity * 2.5	0.05	person	44,100.00			2,209.90			Lab-2
Skilled Labour for Bridges	= 6.0 person / daily productivity * 2.5	1.80	person	29,400.30			53,038.24			Lab-8
Unskilled Labour	= 1.0 person / daily productivity * 2.5	0.05	person	12,150.00			608.85			Lab-21
Miscellaneous cost	4%	0.04		55,856.99	0.00	0	2,234.28	(0.00)	0.00	
Rough Terrain Crane	70 t	0.020	day	399,481.60			8,007.40			OPE-73
Subtotal		1.00	t				66,099			
Per Unit Price		1.00	t				66,099	0	0	

01- 280 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Girder erection Reference H28国基 PIV-7-1-1

Specification : Steel box girder Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight / (0.27 * a *(no of erection +11))		68.6	t/day							
Foreman for Bridges	=1.0 person * 2.5 *(10 t /daily productivity)	0.36	person	44,100.00			16,071.43			Lab-2
Skilled Labour for Bridges	=6.0 person * 2.5 *(10 t /daily productivity)	2.19	person	29,400.30			64,286.37			Lab-8
Unskilled Labour	=1.0 person * 2.5 *(10 t /daily productivity)	0.36	person	12,150.00			4,427.84			Lab-21
Miscellaneous cost	7%	0.07		84,785.64	0.00	0	5,934.99	(0.00)	0.00	
Crawler crane	200t hang	0.146	day	2,814,362.92			410,256.99			OPE-46
Barge	2000t	0.146	day	3,192,908.65	0.00	0	465,438.58	(0.00)	0.00	Mac-d(19)
Subtotal		10.00	t				966,416			
Per Unit Price		1.00	t				96,642	0	0	

01- 281 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Dead-bolting including temporary erection bolt Reference H28MLIT 752

Specification : Steel box girder_PKG2 Quantity・Unit : 100 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =T:Total nos / ((0.52 * T:Total nos/1000)+0.19)		1920	nos / day							
Foreman for Bridges	= (100 / 1410) * 1.0 person * 2.5	0.13	person	44,100.00			5,742.19			Lab-2
Skilled Labour for Bridges	= (100 / 1410) * 5.0 person * 2.5	0.65	person	29,400.30			19,140.82			Lab-8
Unskilled Labour	= (100 / 1410) * 1.0 person * 2.5	0.13	person	12,150.00			1,582.03			Lab-21
Miscellaneous cost	8%	0.08		26,465.04	0.00	0	2,117.20	(0.00)	0.00	
Torque share high tension bolt		100	nos							Mat-**
*材料で計上										
Temporary erection bolts and pins	M22	100	nos			47.4			4,740.00	
	JPY158/day*30day = JPY4740/month									
Subtotal		100.00	nos				28,582		4,740	
Per Unit Price		1.00	nos				286	0	47	

01- 282

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Modular type

Reference JICA stud

Specification : P20

Quantity・Unit : 20.4 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Expansion Joint	P20	20.40	m	0.00	0.00	1,787,647	0.00	(0.00)	36,468,000.02	Mat-403
Concreting_on_river	Class D	6.12	m3	105,754.07	0.00	0.00	647,214.91	(0.00)	0.00	01-266
Rebar work_SD345	Arranging D13	0.612	ton	126,764	0	78,422	77,579	0	47,994	00-79
Rebar work_SD345	Assembling D13	0.612	ton	154,137	0	0	94,332	0	0	00-82
Crawler crane	50 ~ 55t hang	1.00	day	297,147	0		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221	0	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130			223,826			OPE-66
Foreman for Bridges		1.00	person	44,100.00			44,100.00			Lab-2
Skilled Labour for Bridges		2.00	person	29,400.30			58,800.60			Lab-8
Unskilled Labour		6.00	person	12,150.00			72,900.00			Lab-21
Rebar Worker		4.00	person	18,270.00			73,080.00			Lab-15
Subtotal		20.40	m				2,977,201		36,515,994	
Per Unit Price		1.00	m				145,941	0	1,790,000	

01- 283

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint labour cost

Reference H28国基 PIV-7-2-1

Specification : A-5

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 1.4 person/100m2 * 4 times	5.60	person			29,100			162,960.00	Lab-50
Subtotal		100.00	m2						162,960	
Per Unit Price		1.00	m2				0	0	1,630	

01- 284

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint Material cost

Reference H28国基 PIV-7-2-3

Specification : A-5

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint										
Lead-free, Chromium-free anticorrosive paints		17.00	kg			495			8,415.00	
Lead-free, Chromium-free anticorrosive paints		17.00	kg			495			8,415.00	
Ready mixed paints (Synthetic resin type)	Intermediate coat	12.00	kg			735			8,820.00	
Ready mixed paints (Synthetic resin type)	Top coat	11.00	kg			1,190			13,090.00	
Thinner										
for ordinal paint		1.70	kg			135			229.50	
for ordinal paint		1.70	kg			135			229.50	
for ordinal paint		1.20	kg			135			162.00	
for ordinal paint		1.10	kg			135			148.50	
Miscellaneous cost	10%	0.10		0.00	0.00	39,509.50	0.00	(0.00)	3,950.95	
Subtotal		100.00	m2						43,460	
Per Unit Price		1.00	m2				0	0	435	

01- 285

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Paint labour cost

Reference H28国基 PIV-7-2-1

Specification : D-6

Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Coating Applicator for Bridges	= 1.4 person/100m2 * 2 times * 1.6(inside)	4.48	person			29,100			130,368.00	Lab-50
Subtotal		100.00	m2						130,368	
Per Unit Price		1.00	m2				0	0	1,304	

01- 286 Productivity correction coefficient: Labour coefficient Machine coefficient

Asia

Item : Paint Material cost Reference H28国基 PIV-7-2-3

Specification : D-6 Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Paint										
Zinc Rich Paint			kg							
Epoxy Resin Paint Primer			kg							
Fluorocarbon Resin Intermediate Paint			kg							
Fluorocarbon Resin Finish Paint			kg							
Modified Epoxy Resin Paint		41.00	kg			1,010			41,410.00	
Modified Epoxy Resin Paint		41.00	kg			1,010			41,410.00	
Ultra Thick Modified Epoxy Resin Paint			kg							
Thinner										
Zinc Rich Paint Thinner			kg							
Epoxy Resin Paint Primer Thinner			kg							
Fluorocarbon Resin Intermediate Paint Thinner			kg							
Fluorocarbon Resin Finish Paint Thinner			kg							
Modified Epoxy Resin Paint Thinner		8.20	kg			355			2,911.00	
Miscellaneous cost	10%	0.10		0.00	0.00	85,731.00	0.00	(0.00)	8,573.10	
Subtotal		100.00	m2						94,304	
Per Unit Price		1.00	m2				0	0	943	

01- 287 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-15 (Exterior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 5 times	26.13	person	20,160.00			526,680.00			Lab-9
	K1: 0.1									
Paint										
Lead-free, Chromium-free anticorrosive paints		42.00	kg			495			20,790.00	
Lead-free, Chromium-free anticorrosive paints			kg			495			0.00	
Ready mixed paints (Synthetic resin type)	Intermediate coat	12.00	kg			735			8,820.00	
Ready mixed paints (Synthetic resin type)	Top coat	11.00	kg			1,190			13,090.00	
Thinner										
for ordinal paint		4.20	kg			135			567.00	
for ordinal paint		0.00	kg			135			0.00	
for ordinal paint		1.20	kg			135			162.00	
for ordinal paint		1.10	kg			135			148.50	
Miscellaneous cost	4%	0.04		526,680.00	0.00	43,577.50	21,067.20	(0.00)	1,743.10	
Subtotal		100.00	m2				617,854		45,321	
Per Unit Price		1.00	m2				6,179	0	453	

01- 288 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Painting in site Reference H5MLIT 669

Specification : F-16 (Interior) Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Preparation										
Coating Applicator for Bridges	= 1.3 person/100m2 * 2.5	3.25	person	20,160.00			65,520.00			Lab-9
Miscellaneous cost	7%	0.07		65,520.00			4,586.40			
Painting new bridge										
Daily productivity(1time paint)	= 1.9 person/100m2 * 2.5	4.75								
Coating Applicator for Bridges	=Daily productivity*{(1+K1)*(1+K2)} * 3 times	15.68	person	20,160.00			316,008.00			Lab-9
	K1: 0.1									
Paint										
Zinc Rich Paint			kg			1,150			0.00	
Epoxy Resin Paint Primer			kg			1,010			0.00	
Fluorocarbon Resin Intermediate Paint			kg			1,080			0.00	
Fluorocarbon Resin Finish Paint			kg			3,850			0.00	
Modified Epoxy Resin Paint		20.00	kg			1,010			20,200.00	
Modified Epoxy Resin Paint			kg			1,010			0.00	
Ultra Thick Modified Epoxy Resin Paint		100.00	kg			1,270			127,000.00	
Thinner										
Zinc Rich Paint Thinner		0.00	kg			375			0.00	
Epoxy Resin Paint Primer Thinner		10.00	kg			355			3,550.00	
Fluorocarbon Resin Intermediate Paint Thinner		0.00	kg			355			0.00	
Fluorocarbon Resin Finish Paint Thinner		0.00	kg			390			0.00	
Modified Epoxy Resin Paint Thinner		2.00	kg			355			710.00	
Miscellaneous cost	4%	0.04		316,008.00	0.00	151,460.00	12,640.32	(0.00)	6,058.40	
Subtotal		100.00	m2				398,755		157,518	
Per Unit Price		1.00	m2				3,988	0	1,575	

01- 289 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item: Rip rap setting Reference JICA study team

Specification: for Outlet Quantity・Unit: 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Unskilled Labour	4.0(person)	4.00	person	12,150.00			48,600.00			Lab-21
Backhoe	・Crawler typeFull bucket0.6m3 4.0/0.85	4.71	hr	48,496.82			228,220.31			OPE-36
Crushed stone	C-40	110	m3	41,850.00			4,603,500.00			Mat-47
Subtotal		100.00	m3				4,880,320.31			
Per Unit Price		1.00	m3				48,803.20	0.00	0	

01- 290 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item : Binder Course (Carriage / Bridge Section) Reference H22MLIT 500

Specification : t=4cm Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870			1,119			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580			2,237			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150			3,729			Lab-21
Asphalt mix	Surface course, heated asphalt	4.79	m3	166,028			795,193			Mat-70
Asphalt finisher	Wheel type 2.4-4.5m 1.0(day)×100/2,300/95%	0.05	day	511,816			26,180			OPE-1
Road roller	10-12t 1.0(day)×100/2,300/95%	0.05	day	226,584			11,590			OPE-18
Tire roller	8-20t 1.0(day)×100/2,300/95%	0.05	day	270,040			13,813			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*19%	0.19	-	58,668			11,147			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.04(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=4.79(m3)										
Subtotal		100.00	m2				865,007			
Per Unit Price		1.00	m2				8,650	0	0	

01- 291 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item : Surface Course (Carriage) Reference H22MLIT 500

Specification : t=4cm Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	1.0(person)×100/2,300/85%	0.05	person	21,870			1,119			Lab-1
Skilled Labour	3.0(person)×100/2,300/85%	0.15	person	14,580			2,237			Lab-20
Unskilled Labour	6.0(person)×100/2,300/85%	0.31	person	12,150			3,729			Lab-21
Asphalt mix	Surface course, heated asphalt	4.79	m3	166,028			795,193			Mat-70
Bitumin material	Tack coat 4.3l=4.3kg	43.00	kg	630			27,090			Mat-68
Asphalt finisher	Wheel type 2.4-4.5m 1.0(day)×100/2,300/95%	0.05	day	511,816			26,180			OPE-1
Road roller	10-12t 1.0(day)×100/2,300/95%	0.05	day	226,584			11,590			OPE-18
Tire roller	8-20t 1.0(day)×100/2,300/95%	0.05	day	270,040			13,813			OPE-5
Miscellaneous cost	Subtotal(Labour, machine, and operation cost)*19%	0.19	-	58,668			11,147			
Daily productivity =2,300(m2)										
100m2 required work days=100(m2)/daily productivity(m2/day)=100/2,300/85%=0.05(day)										
100m2 requires asphalt mix volume(m3)=100(m2)×0.04(m)×(2.35/2.10)(volume rate change before/after construction)×(1+0.07)=4.79(m3)										
Subtotal		100.00	m2				892,097			
Per Unit Price		1.00	m2				8,921	0	0	

01- 292 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient Simple

Item : Bridge Surface Works Reference H22MLIT 500

Specification : Deck Waterproof Works Quantity・Unit : 100 m2

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.50(person)*2.5	1.25	person	21,870			27,338			Lab-1
Skilled Labour	1.20(person)*2.5	3.00	person	14,580			43,740			Lab-20
Unskilled Labour	0.70(person)*2.5	1.75	person	12,150			21,263			Lab-21
Miscellaneous cost	Subtotal(Labour cost)*19%	0.05	-	92,340			4,617			
Asphalt Waterproof membrane		100.00	m2	0	0	2,138	0	0	213,750	Mat-98
Subtotal		100.00	m2				96,957		213,750	
Per Unit Price		1.00	m2				970	0	2,138	

01- 293

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Fabrication_Railing on pier(Design change)

Reference H28国基 PIV-7-1-1

Specification : Steel box girder(PKG1)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		15.27	nos			26,900			410,763	
G	2.036ton									
g	7.5person/ton									
a	0									
L	SS400_65*65*6	0.994	t	0.00	0.00	63,900	0.00	(0.00)	63,516.60	Mat-194
PL	SM400A_t=9mm	0.276	t	0.00	0.00	122,720	0.00	(0.00)	33,870.58	Mat-324
PL	SM400A_t=6mm	0.130	t	0.00	0.00	122,720	0.00	(0.00)	15,953.54	Mat-324
STK	STK400	0.64	t	0.00	0.00	99,900	0.00	(0.00)	63,536.40	Mat-152
U Bolt	SS400_25C	176.000	nos	400.24	0.00	0	70,442.24	(0.00)	0.00	Mat-452
U Bolt	SS400_15C	312.00	nos	346.15	0.00	0	107,999	0	0	Mat-453
ANC	Concrete anchor_SS400_M16*125	704.00	nos	2,217.55	0.00	0.00	1,561,155.20	(0.00)	0.00	Mat-454
Hot-Dip Galvanization	HDZ55	1.400	t			55,800			78,120	Mat-415
Hot-Dip Galvanization	HDZ35	0.974	t			54,000			52,596.00	Mat-414
Subtotal		1.00	LS				1,739,596		718,356	
Per Unit Price		1.00	LS				1,739,596	0	718,356	

01- 294

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(Steel Plate)

Reference

Specification : Main girder_3 spans Steel box girder (Design change)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
PL	SM570 16< t ≦40	980.201	t	0	0	183,730	0	0	180,092,002	Mat-316
PL	SM570 t ≦16	1,030.537	t	0	0	145,800	0	0	150,252,273	Mat-449
PL	SM570-H	215.328	t	0	0	147,600	0	0	31,782,457	Mat-450
PL	SM490YB t ≦25	1,300.059	t	0	0	140,570	0	0	182,749,410	Mat-319
PL	SM490YB 25 < t ≦38	152.566	t	0	0	138,172	0	0	21,080,275	Mat-320
PL	SM490YB 38 < t ≦50		t	0	0	141,103	0	0	0	Mat-321
PL	SM490YA t ≦25	3,472.048	t	0	0	136,573	0	0	474,188,679	Mat-322
PL	SM490C 50 < t ≦100		t	0	0	146,964	0	0	0	Mat-323
PL	SM400A t ≦38	1,882.494	t	0	0	122,720	0	0	231,018,679	Mat-324
PL	SS400		t	0	0	117,125	0	0	0	Mat-325
Scrap	Heavy H1	5,498.490	t			21,500			(118,217,524.25)	Mat-147
	*Original weight	7,854.985	t							
Indirect matrial		7,854.985	t			12,000			94,259,820.00	Mat-139
Hot-Dip Galvanization	HDZ55		t			55,800			0	Mat-415
Miscellaneous cost										
Subtotal		1.00	LS						1,247,206,070	
Per Unit Price		1.00	LS				0	0	1,247,206,070	

Q*1.15

01- 295

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(Shapes)

Reference

Specification : Main girder_3 spans Steel box girder (Design change)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
BULB	SM490YA	248.056	t	0	0	197,472	0	0	48,984,291	Mat-451
U	SM490YA 320X240X8	881.664	t	0	0	279,919	0	0	246,794,417	Mat-330
Scrap	Heavy H1	706.075	t			21,500			(15,180,618.95)	Mat-147
	*Original weight	1,008.679	t							
Indirect matrial		1,008.679	t			12,000			12,104,148.00	Mat-139
Subtotal		1.00	LS						292,702,237	
Per Unit Price		1.00	LS				0	0	292,702,237	

Q*1.12

01- 296

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material cost(HTB)

Reference

Specification : Main girder_3 spans Steel box girder (Design change)

Quantity・Unit : 1 LS

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
TCB		S10T M24		t	0	0	262,640	0	0	0	Mat-342
TCB		S10T M22	128.66	t	0	0	249,196	0	0	32,062,074	Mat-343
TCB		S10T M16		t	0	0	270,000	0	0	0	Mat-344
HTB		F10T M22		t	0	0	288,633	0	0	0	Mat-345
TCB	S10T	M24*135	223,400	nos	0			0			Mat-229
		M22*110		nos	0			0			Mat-228
		M22*95		nos	0			0			Mat-227
		M22*85		nos	0			0			Mat-226
		M22*80		nos	0			0			Mat-225
		M22*75		nos	0			0			Mat-224
		M22*70		nos	0			0			Mat-223
		M22*65		nos	0			0			Mat-222
		M16*85		nos	0			0			Mat-221
HTB	F10T	M22*80		nos							
		M22*75		nos							
Miscellaneous cost											
Subtotal			1.00	LS						32,062,074	
Per Unit Price			1.00	LS				0	0	32,062,074	

01-	297	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Fabrication cost of direct labour cost　　Reference : H28国基 PIV-7-1-1

Specification : Main girder_3 spans Steel box girder (Design change)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
No of processing		23,367.97	nos			26,900			628,598,393	
Y={(Y1+Y2)*K+Y3+Y4}*(1+a)*(1+b)*(1+c)*(1+d)+Y5, (*round "No" off to two decimal places)										
(Y1) Total No. of process		78,561.30	nos							
(Y2) No. of welding		2,055.12	nos							
(Y3) No. of Pre-assembling in factory		4,625.16	nos							
Miscellaneous cost										
Subtotal		1.00	LS						628,598,393	
Per Unit Price		1.00	LS				0	0	628,598,393	

01-	298	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Bent foundation (on land) Reference JICA study team

Specification : Concrete foundation_3 spans Steel box girder (Design change) Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

01-	299	Productivity correction coefficient: Asia	Labour coefficient	Technical	Machine coefficient	none

Item : Bent equipment instllation and demolition (on land) Reference H28MLIT 754

Specification : 3 spans Steel box girder (Design change) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity: m2/day	= T /(0.14 * T + 1.0)	6.8								
T : Total weight of bent		133.9	t							
Bent equipment hire	133.9 t * 90 day	12,051.00	t-day	8,474	0	0	102,114,844	0	0	Mac-d(49)
Scaffold for bent	2.0m < h <10m	0.04		102,114,844	0	0	4,084,594	0	0	
Foreman for Bridges	1.0per*(Total weight / daily productivity) * 2.5	49.23	person	44,100			2,170,952			Lab-2
Skilled Labour for Bridges	5.0per*(Total weight / daily productivity) * 2.5	246.14	person	29,400			7,236,581			Lab-8
Unskilled Labour	1.0per*(Total weight / daily productivity) * 2.5	49.23	person	12,150			598,119			Lab-21
Truck crane	25t hung (T/(0.14*T+1.0))	19.69	days	232,008	0		4,568,510	0		OPE-27
Subtotal		1.00	LS				120,773,601			
Per Unit Price		1.00	LS				120,773,601	0	0	

01-	300	Productivity correction coefficient: Asia	Labour coefficient	Machine coefficient

Item : Fall prevention / protection and Ascending ladder — Reference H28MLIT 746-748

Specification : 3 spans Steel box girder (Design change) — Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fall prevention / protection	(Erection:1.0)+(Painting:1.0) month	2.00	month	0.00	0.00	2,080,000	0	0	4,160,000	02-271
Scaffolding for ascending piers		2.00	month	0.00	0.00	200,440	0	0	400,880	02-272
Subtotal		1.00	LS						4,560,880	
Per Unit Price		1.00	LS				0	0	4,560,880	

01- 301 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reassembling in site Reference H28MLIT P751

Specification : 3 spans Steel box girder (Design change) Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =weight of re-assembling / (0.02 * (weight of re-assembling+20))		49.07	t							
Foreman for Bridges	= 1.0 person / daily productivity * 2.5	0.05	person	44,100.00			2,246.69			Lab-2
Skilled Labour for Bridges	= 6.0 person / daily productivity * 2.5	1.83	person	29,400.30			53,921.00			Lab-8
Unskilled Labour	= 1.0 person / daily productivity * 2.5	0.05	person	12,150.00			618.98			Lab-21
Miscellaneous cost	4%	0.04		56,786.67	0.00	0	2,271.47	(0.00)	0.00	
Rough Terrain Crane	70 t	0.020	day	399,481.60			8,140.68			OPE-73
Subtotal		1.00	t				67,199			
Per Unit Price		1.00	t				67,199	0	0	

01- 302 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Girder erection(P5-6) Reference H28国基 PIV-7-1-1

Specification : 3 spans Steel box girder (Design change) Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight / (0.27 * a *(no of erection +11))		90.3	t/day							
Foreman for Bridges	=1.0 person * 2.5 *(10 t /daily productivity)	0.28	person	44,100.00			12,209.30			Lab-2
Skilled Labour for Bridges	=6.0 person * 2.5 *(10 t /daily productivity)	1.66	person	29,400.30			48,837.71			Lab-8
Unskilled Labour	=1.0 person * 2.5 *(10 t /daily productivity)	0.28	person	12,150.00			3,363.79			Lab-21
Miscellaneous cost	7%	0.07		64,410.80	0.00	0	4,508.76	(0.00)	0.00	
Crawler crane	200t hang	0.111	day	2,814,362.92			311,668.10			OPE-46
Subtotal		10.00	t				380,588			
Per Unit Price		1.00	t				38,059	0	0	

01- 303

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Barrier fabrication

Reference H28国基 PIV-7-1-1

Specification : 3 spans Steel box girder (Design change)

Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		51.89	nos			26,900			1,395,770	
G	5.405ton									
g	9.6person/ton									
a	0									
STKR	125*125*6	5.405	ton	0	0	81,000	0	0	437,800	Mat-253
SM400	250*250*19	0.396	ton			115,000			45,492	
SM400	125*125*19	0.348	ton			115,000			40,077	
M22*80		0.10	ton	0	0	288,633	0	0	28,049	
M16*45		0.012	ton	0	0	1,342,640	0	0	15,922	
Hot-Dip Galvanization	HDZ55	5.40	t			55,800			301,595	Mat-415
Subtotal		100.00	m						2,264,705	
Per Unit Price		1.00	m				0	0	22,647	

01- 304 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Bent instllation and removal Reference

Specification : 3 spans Steel box girder (Design change)(P6-7,7-8) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Temporary_Jetty	Superstructure_Installation	36.5304	t	448,742	0	0	16,392,735	0	0	00-24
Temporary Jetty	Remove superstructure	36.5304	t	245,450	0	0	8,966,396	0	0	00-149
Steel Pipe driving_(Driving Length16-32m)_φ1200	for bent piles	48	nos	3,728,939	444	0	178,989,067	21,307	0	02-245
Demobilization	30%	0.3		715,956,269	85,229	0	214,786,881	25,569	0	
Bent equipment except for piles_PKG1	Material	1	LS	0	0	70,923,287	0	0	70,923,287	02-246
Subtotal		1.00	LS				419,135,079	46,876	70,923,287	
Per Unit Price		1.00	LS				419,135,079	46,876	70,923,287	

01-	305	Productivity correction coefficient: Asia	Labour coefficient	Machine coefficient

Item : Scaffolding Reference H28MLIT 746-748

Specification : 3 spans Steel box girder (Design change)(P6-7,7-8) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main & Intermediate scaffolding	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	4,992,000	0	0	17,472,000	02-273
Additional work space scaffolding	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	90,749	0	0	317,622	02-274
Safety passage	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	2,496,000	0	0	8,736,000	02-275
Additional support for steeldeck	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	2,496,000	0	0	8,736,000	02-276
Protective shelf for hanging scaffold	(Erection:2.5)+(Painting:1.0) month	3.50	month	0	0	2,496,000	0	0	8,736,000	02-278
Subtotal		1.00	LS						43,997,622	
Per Unit Price		1.00	LS				0	0	43,997,622	

01-	306	Productivity correction coefficient: Asia	Labour coefficient	Machine coefficient

Item : Fall prevention / protection and Ascending ladder — Reference : H28MLIT 746-748

Specification : 3 spans Steel box girder (Design change)(P6-7,7-8) — Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Fall prevention / protection	(Erection:2.5)+(Painting:1.0) month	3.50	month	0.00	0.00	2,163,200	0	0	7,571,200	02-278
Scaffolding for ascending piers	Erection:2.5	2.50	month	0.00	0.00	200,440	0	0	501,100	02-279
Subtotal		1.00	LS						8,072,300	
Per Unit Price		1.00	LS				0	0	8,072,300	

01- 307 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reassembling(P6-7,7-8) Reference H28MLIT P751

Specification : in construction yard Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =weight of re-assembling / (0.02 * (weight of re-assembling+20))		49.58	t							
Foreman for Bridges	= 1.0 person / daily productivity * 2.5	0.05	person	44,100.00			2,223.59			Lab-2
Skilled Labour for Bridges	= 6.0 person / daily productivity * 2.5	1.82	person	29,400.30			53,366.74			Lab-8
Unskilled Labour	= 1.0 person / daily productivity * 2.5	0.05	person	12,150.00			612.62			Lab-21
Miscellaneous cost	4%	0.04		56,202.95	0.00	0	2,248.12	(0.00)	0.00	
Rough Terrain Crane	70 t	0.020	day	399,481.60			8,057.00			OPE-73
Subtotal		1.00	t				66,508			
Per Unit Price		1.00	t				66,508	0	0	

01- 308 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Girder erection(P6-7,7-8) Reference H28国基 PIV-7-1-1

Specification : 275tCC mounted on 3,000t barge Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity =Total weight / (0.27 * a *(no of erection +11))		106.4	t/day							
Foreman for Bridges	=1.0 person * 2.5 *(10 t /57.6 t)	0.23	person	44,100.00			10,361.84			Lab-2
Skilled Labour for Bridges	=6.0 person * 2.5 *(10 t /57.6 t)	1.41	person	29,400.30			41,447.79			Lab-8
Unskilled Labour	=1.0 person * 2.5 *(10 t /57.6 t)	0.23	person	12,150.00			2,854.79			Lab-21
Miscellaneous cost	7%	0.07		54,664.42	0.00	0	3,826.51	(0.00)	0.00	
Crawler crane	275t hang	0.094	day	70,476.00	4,793.48		6,623.68	(450.52)		OPE-47
Barge	3000t	0.094	day	0.00	3,646.89	0	0.00	(342.75)	0.00	Mac-d(18)
Subtotal		10.00	t				65,115	793		
Per Unit Price		1.00	t				6,511	79	0	

01-	309	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Inspection way　　Reference H28国基 PIV-7-1-1

Specification : 3 spans Steel box girder (Design change)　　Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		86.81	nos			26,900			2,335,227	
G	9ton									
g	9.6person/ton									
a	0									
L	SS400_65*65*6	12.758	ton	0.00	0.00	63,900	0.00	(0.00)	815,217.94	Mat-194
FB	SS400_65*1270*6	1.528	ton	0.00	0.00	79,200	0.00	(0.00)	121,040.23	Mat-199
FB	SS400_65*1104*6		ton							
FB	SS400_65*545*6		ton							
Footway_Expanded metal	SM400	0.436	ton	0.00	0.00	713,333	0	0	310,734	Mat-413
Hot-Dip Galvanization	HDZ55	9.04	t			55,800			504,591	Mat-415
Subtotal		1.00	LS						4,086,811	
Per Unit Price		1.00	LS				0	0	4,086,811	

01- 310

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Water pipe support

Reference JICA study team

Specification : 3 spans Steel box girder (Design change)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Y5=G*g*(1+a)		8.82	nos			26,900			237,154	
G	2.9ton									
g	3.0person/ton									
a	0									
L	SS400_65*65*6		ton	0	0	63,900	0	0	0	Mat-194
FB	SS400_65*1270*6	2.939	ton	0	0	79,200	0	0	232,746	Mat-199
			ton							
			ton							
Hot-Dip Galvanization	HDZ55	2.94	t			55,800			163,980	Mat-415
Subtotal		1.00	LS						633,881	
Per Unit Price		1.00	LS				0	0	633,881	

01-	311	Productivity correction coefficient:	Labour coefficient	Machine coefficient
		Asia		

Item : Modular type — Reference: JICA stud

Specification : P5 — Quantity・Unit : 20.4 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Expansion Joint	P5	20.40	m	0.00	0.00	1,228,676	0.00	(0.00)	25,064,999.99	Mat-465
Concreting_on_river	Class D	6.12	m3	105,754.07	0.00	0	647,214.91	(0.00)	0.00	01-266
Rebar work_SD345	Arranging D13	0.612	ton	126,763.52	0.00	78,422	77,579	0	47,994	00-79
Rebar work_SD345	Assembling D13	0.612	ton	154,136.93	0.00	0	94,332	0	0	00-82
Crawler crane	50 ~ 55t hang	1.00	day	297,147.20	0.00		297,147	0		OPE-26
Barge	800t	1.00	day	1,388,221.15	0.00	0	1,388,221	0	0	Mac-d(20)
Tag boat	800PS_70GT	0.20	day	1,119,130.43			223,826			OPE-66
Foreman for Bridges		1.00	person	44,100.00			44,100.00			Lab-2
Skilled Labour for Bridges		2.00	person	29,400.30			58,800.60			Lab-8
Unskilled Labour		6.00	person	12,150.00			72,900.00			Lab-21
Rebar Worker		4.00	person	18,270.00			73,080.00			Lab-15
Subtotal		20.40	m				2,977,201		25,112,994	
Per Unit Price		1.00	m				145,941	0	1,231,029	

02- 1

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Main & Intermediate scaffolding

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main	20 m * 2 set * 2 sides	1.00	month			4,396,800			4,396,800.00	
Intermediate	20 m * 2 set * 2 sides	1.00	month			4,396,800			4,396,800.00	
Subtotal		1.00	month						8,793,600	
Per Unit Price		1.00	month				0	0	8,793,600	

02- 2

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional work space scaffolding

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	20 m * 2 set * 2 sides	1.00	month			79,961			79,961.00	
Subtotal		1.00	month						79,961	
Per Unit Price		1.00	month				0	0	79,961	

02- 3

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Safety passage

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	20 m * 2 set * 2 sides	1.00	month			4,396,800			4,396,800.00	
Subtotal		1.00	month						4,396,800	
Per Unit Price		1.00	month				0	0	4,396,800	

02- 4

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional support for steeldeck

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	20 m * 2 set * 2 sides	1.00	month			4,396,800			4,396,800.00	
Subtotal		1.00	month						4,396,800	
Per Unit Price		1.00	month				0	0	4,396,800	

02- 5

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Protective shelf for hanging scaffold

Reference

Specification : Cable Stayed Bridge

Quantity · Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	20 m * 2 set * 2 sides	1.00	month			4,396,800			4,396,800.00	
Subtotal		1.00	month						4,396,800	
Per Unit Price		1.00	month				0	0	4,396,800	

02- 6

Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Retaining Wall (Type 2)

Reference

Specification : 24N/mm2

Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	0.15 person *1.5	0.23	person	21,870.00			4,920.75			
Skilled Labour	0.23 person *1.5	0.35	person	14,580.00			5,030.10			
Unskilled Labour	0.53 person *1.5	0.80	person	12,150.00			9,659.25			
Concrete	24 N/mm2	10.60	m3	80,122.96	0.00	0	849,303.38	0.00	0	
Concrete Pump Truck Operation	90 ~ 110m3/h	0.12	day	109,945.50	0.00		13,193.46	0.00		
Miscellaneous cost	2%	0.02		882,106.94	0.00	0				
*Curing										
Unskilled Labour	0.3 person *1.5	0.45	person	12,150.00			5,467.50			
Miscellaneous cost	17%	0.17		5,467.50	0.00	0				
Subtotal		10.00	m3				887,574			
Per Unit Price		1.00	m3				88,757	0	0	

02- 7

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Fall prevention / protection

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Wire bridge protection	20 m * 2 set * 2 sides	1.00	month			1,905,280			1,905,280	
Subtotal		1.00	month						1,905,280	
Per Unit Price		1.00	month				0	0	1,905,280	

02- 8

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Scaffolding for ascending piers

Reference

Specification : Cable Stayed Bridge

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	4nos	1.00	month			400,880			400,880	
Subtotal		1.00	month						400,880	
Per Unit Price		1.00	month				0	0	400,880	

02- 9 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Equipment for steel deck welding Reference

Specification : Quantity・Unit : 1 day

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Electric welding machine	Submerged Arc Welding machine	1.70	day			4,580			7,786.00	CEDC_18-23_150-001
Electric welding machine	Alternating current arc welder	1.70	day			537			913.00	CEDC_18-23_500-001
Electric welding machine	CO2 semi-automatic welding machine	1.70	day			1,220			2,074.00	CEDC_18-23_500-001
Rectifier	for gouging	1.70	day			983			1,671	CEDC_18-25_600-001
Flux collecting equipment		1.70	day			695			1,182	CEDC_18-25_015-001
Support for backing member		80.00	nos			34			2,720	CEDC_18-25_100-002
Dryer for welding		1.70	day			469			797	CEDC_18-25_100-001
Subtotal		1.00	day						17,143	
Per Unit Price		1.00	day				0	0	17,143	

02- 10 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Consumable materials Reference

Specification : Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Welding wire	JIS Z 3351	100.00	kg			620			62,000.00	
Flux	JIS Z 3352	130.00	kg			2,500			325,000.00	
Filling material		45.00	kg			1,000			45,000.00	
Backing member for welding	for submarge weld	190.00	nos			2,000			380,000	
Plate for backing material		165.00	nos			1,500			247,500	
End tab material		10.00	nos			2,000			20,000	
Subtotal		100.00	m						1,079,500	
Per Unit Price		1.00	m				0	0	10,795	

02- 13 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.25	person	29,400			36,750			Lab-8
Unskilled Labour		0.75	person	12,150			9,113			Lab-21
Miscellaneous cost	10%	0.10		78,938	0	0	7,894	0	0	
Subtotal		1.00	nos				86,832			
Per Unit Price		1.00	nos				86,832	0	0	

02- 15 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.50	person	29,400			44,100			Lab-8
Unskilled Labour		1.50	person	12,150			18,225			Lab-21
Miscellaneous cost	10%	0.10		95,400	0	0	9,540	0	0	
Subtotal		1.00	nos				104,940			
Per Unit Price		1.00	nos				104,941	0	0	

02- 16 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.25	person	29,400			36,750			Lab-8
Unskilled Labour		0.75	person	12,150			9,113			Lab-21
Miscellaneous cost	10%	0.10		78,938	0	0	7,894	0	0	
Subtotal		1.00	nos				86,832			
Per Unit Price		1.00	nos				86,832	0	0	

02- 18 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.50	person	29,400			44,100			Lab-8
Unskilled Labour		1.50	person	12,150			18,225			Lab-21
Miscellaneous cost	10%	0.10		95,400	0	0	9,540	0	0	
Subtotal		1.00	nos				104,940			
Per Unit Price		1.00	nos				104,941	0	0	

02- 19 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.50	person	44,100			22,050			Lab-1
Skilled Labour for Bridges		1.00	person	29,400			29,400			Lab-8
Unskilled Labour		0.50	person	12,150			6,075			Lab-21
Miscellaneous cost	10%	0.10		57,525	0	0	5,753	0	0	
Subtotal		1.00	nos				63,278			
Per Unit Price		1.00	nos				63,278	0	0	

02- 21 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.50	person	29,400			44,100			Lab-8
Unskilled Labour		0.75	person	12,150			9,113			Lab-21
Miscellaneous cost	10%	0.10		86,288	0	0	8,629	0	0	
Subtotal		1.00	nos				94,917			
Per Unit Price		1.00	nos				94,917	0	0	

02- 22

Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : 5,000-10,000kN type

Reference

Quotation

Specification : 37H

Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		4.25	person	44,100			187,425			Lab-1
Skilled Labour for Bridges		5.00	person	29,400			147,002			Lab-8
Unskilled Labour		8.50	person	12,150			103,275			Lab-21
Miscellaneous cost	10%	0.10		437,702	0	0	43,770	0	0	
Subtotal		1.00	nos				481,472			
Per Unit Price		1.00	nos				481,472	0	0	

02- 24 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		6.00	person	44,100			264,600			Lab-1
Skilled Labour for Bridges		6.50	person	29,400			191,102			Lab-8
Unskilled Labour		12.25	person	12,150			148,838			Lab-21
Miscellaneous cost	10%	0.10		604,539	0	0	60,454	0	0	
Subtotal		1.00	nos				664,993			
Per Unit Price		1.00	nos				664,993	0	0	

02- 25 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		2.25	person	44,100			99,225			Lab-1
Skilled Labour for Bridges		5.75	person	29,400			169,052			Lab-8
Unskilled Labour		8.00	person	12,150			97,200			Lab-21
Miscellaneous cost	10%	0.10		365,477	0	0	36,548	0	0	
Subtotal		1.00	nos				402,024			
Per Unit Price		1.00	nos				402,024	0	0	

02- 27

Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : 17,000-24,000kN type

Reference

Quotation

Specification : 70H

Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.75	person	44,100			77,175			Lab-1
Skilled Labour for Bridges		4.75	person	29,400			139,651			Lab-8
Unskilled Labour		6.25	person	12,150			75,938			Lab-21
Miscellaneous cost	10%	0.10		292,764	0	0	29,276	0	0	
Subtotal		1.00	nos				322,040			
Per Unit Price		1.00	nos				322,040	0	0	

02- 28 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		20.50	person	44,100			904,050			Lab-1
Skilled Labour for Bridges		36.75	person	29,400			1,080,461			Lab-8
Unskilled Labour		40.75	person	12,150			495,113			Lab-21
Miscellaneous cost	10%	0.10		2,479,624	0	0	247,962	0	0	
Subtotal		1.00	nos				2,727,586			
Per Unit Price		1.00	nos				2,727,586	0	0	

02- 30 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		18.50	person	44,100			815,850			Lab-1
Skilled Labour for Bridges		31.00	person	29,400			911,409			Lab-8
Unskilled Labour		35.00	person	12,150			425,250			Lab-21
Miscellaneous cost	10%	0.10		2,152,509	0	0	215,251	0	0	
Subtotal		1.00	nos				2,367,760			
Per Unit Price		1.00	nos				2,367,760	0	0	

02- 31 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.50	person	44,100			22,050			Lab-1
Skilled Labour for Bridges		0.50	person	29,400			14,700			Lab-8
Unskilled Labour		1.00	person	12,150			12,150			Lab-21
Miscellaneous cost	10%	0.10		48,900	0	0	4,890	0	0	
Subtotal		1.00	nos				53,790			
Per Unit Price		1.00	nos				53,790	0	0	

02- 33 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.50	person	44,100			66,150			Lab-1
Skilled Labour for Bridges		1.50	person	29,400			44,100			Lab-8
Unskilled Labour		2.75	person	12,150			33,413			Lab-21
Miscellaneous cost	10%	0.10		143,663	0	0	14,366	0	0	
Subtotal		1.00	nos				158,029			
Per Unit Price		1.00	nos				158,029	0	0	

02- 34 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.75	person	44,100			77,175			Lab-1
Skilled Labour for Bridges		3.25	person	29,400			95,551			Lab-8
Unskilled Labour		4.75	person	12,150			57,713			Lab-21
Miscellaneous cost	10%	0.10		230,438	0	0	23,044	0	0	
Subtotal		1.00	nos				253,482			
Per Unit Price		1.00	nos				253,482	0	0	

02- 36 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		3.50	person	44,100			154,350			Lab-1
Skilled Labour for Bridges		7.00	person	29,400			205,802			Lab-8
Unskilled Labour		13.75	person	12,150			167,063			Lab-21
Miscellaneous cost	10%	0.10		527,215	0	0	52,721	0	0	
Subtotal		1.00	nos				579,936			
Per Unit Price		1.00	nos				579,936	0	0	

02- 37 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.00	person	44,100			44,100			Lab-1
Skilled Labour for Bridges		1.00	person	29,400			29,400			Lab-8
Unskilled Labour		2.00	person	12,150			24,300			Lab-21
Miscellaneous cost	10%	0.10		97,800	0	0	9,780	0	0	
Subtotal		1.00	nos				107,580			
Per Unit Price		1.00	nos				107,580	0	0	

02- 39 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.75	person	44,100			77,175			Lab-1
Skilled Labour for Bridges		1.75	person	29,400			51,451			Lab-8
Unskilled Labour		3.50	person	12,150			42,525			Lab-21
Miscellaneous cost	10%	0.10		171,151	0	0	17,115	0	0	
Subtotal		1.00	nos				188,266			
Per Unit Price		1.00	nos				188,266	0	0	

02- 40 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.25	person	44,100			11,025			Lab-1
Skilled Labour for Bridges		0.25	person	29,400			7,350			Lab-8
Unskilled Labour		0.25	person	12,150			3,038			Lab-21
Miscellaneous cost	10%	0.10		21,413	0	0	2,141	0	0	
Subtotal		1.00	nos				23,554			
Per Unit Price		1.00	nos				23,554	0	0	

02- 42 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.50	person	44,100			22,050			Lab-1
Skilled Labour for Bridges		0.50	person	29,400			14,700			Lab-8
Unskilled Labour		0.75	person	12,150			9,113			Lab-21
Miscellaneous cost	10%	0.10		45,863	0	0	4,586	0	0	
Subtotal		1.00	nos				50,449			
Per Unit Price		1.00	nos				50,449	0	0	

02- 43 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		1.25	person	29,400			36,750			Lab-8
Unskilled Labour		1.25	person	12,150			15,188			Lab-21
Miscellaneous cost	10%	0.10		85,013	0	0	8,501	0	0	
Subtotal		1.00	nos				93,514			
Per Unit Price		1.00	nos				93,514	0	0	

02- 45 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.00	person	44,100			44,100			Lab-1
Skilled Labour for Bridges		1.75	person	29,400			51,451			Lab-8
Unskilled Labour		1.75	person	12,150			21,263			Lab-21
Miscellaneous cost	10%	0.10		116,813	0	0	11,681	0	0	
Subtotal		1.00	nos				128,494			
Per Unit Price		1.00	nos				128,494	0	0	

02- 46 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		0.75	person	29,400			22,050			Lab-8
Unskilled Labour		0.75	person	12,150			9,113			Lab-21
Miscellaneous cost	10%	0.10		64,238	0	0	6,424	0	0	
Subtotal		1.00	nos				70,661			
Per Unit Price		1.00	nos				70,662	0	0	

02- 48 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		1.25	person	44,100			55,125			Lab-1
Skilled Labour for Bridges		1.25	person	29,400			36,750			Lab-8
Unskilled Labour		1.25	person	12,150			15,188			Lab-21
Miscellaneous cost	10%	0.10		107,063	0	0	10,706	0	0	
Subtotal		1.00	nos				117,769			
Per Unit Price		1.00	nos				117,769	0	0	

02- 49 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 5,000-10,000kN type Reference Quotation

Specification : 37H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.50	person	44,100			22,050			Lab-1
Skilled Labour for Bridges		0.50	person	29,400			14,700			Lab-8
Unskilled Labour		1.00	person	12,150			12,150			Lab-21
Miscellaneous cost	10%	0.10		48,900	0	0	4,890	0	0	
Subtotal		1.00	nos				53,790			
Per Unit Price		1.00	nos				53,790	0	0	

02- 51 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : 17,000-24,000kN type Reference Quotation

Specification : 70H Quantity・Unit : 1 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges		0.75	person	44,100			33,075			Lab-1
Skilled Labour for Bridges		0.75	person	29,400			22,050			Lab-8
Unskilled Labour		1.50	person	12,150			18,225			Lab-21
Miscellaneous cost	10%	0.10		73,350	0	0	7,335	0	0	
Subtotal		1.00	nos				80,685			
Per Unit Price		1.00	nos				80,685	0	0	

02- 52

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material for Bracket support

Reference

Specification : P11,12

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam (H-300x300x10x15)		8.60	MT	1,053,000			9,056,474			
H-Beam (H-200x200x8x12)		3.88	MT	1,053,000			4,082,723			
Depreciation		(0.70)		13,139,197						
Subtotal		1.00	set				13,139,197			
Per Unit Price		1.00	set				13,139,197	0	0	

02- 53

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material for Bracket support

Reference

Specification : P10,13

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam (H-300x300x10x15)		17.04	MT	1,053,000			17,940,593			
H-Beam (H-200x200x8x12)		9.75	MT	1,053,000			10,267,234			
Depreciation		(0.70)		28,207,827						
Subtotal		1.00	set				28,207,827			
Per Unit Price		1.00	set				28,207,827	0	0	

02- 54

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material for Bracket support

Reference

Specification : other pier

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam (H-300x300x10x15)		17.15	MT	1,053,000			18,062,025			
H-Beam (H-200x200x8x12)		6.49	MT	1,053,000			6,830,811			
Depreciation		(0.70)		24,892,836						
Subtotal		1.00	set				24,892,836			
Per Unit Price		1.00	set				24,892,836	0	0	

02- 60 Productivity correction coefficient: Labour coefficient Machine depending on machine coefficient coefficient General

Asia

Item : Yard Stabilization Reference H24MLIT 52

Specification : t= 50cm Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 127 m2 / day * 0.75	95.25								
Foreman		1.05	person	21,870.00			22,960.63			Lab-1
Skilled Labour		1.05	person	14,580.00			15,307.09			Labour-4
Unskilled Labour		1.05	person	12,150.00			12,755.91			Lab-21
Cement	*1.3 for packing	6.00	t	109,980.00	0.00	0	659,880.00	(0.00)	0	Mat-53
Backhoe	Crawler type0.8m3 (Full bucket0.6m3)	1.05	day	304,207.27			319,377.71			OPE-13
振動ローラ	搭載式 コンバインド型 3～4t	1.05	day	108,640.00	0.00	0	114,057.74	(0.00)	0	ERN_21
Miscellaneous cost	Subtotal(Labour cost,machine expense) × 7 %	0.07		484,459.08			33,912.14			
Subtotal		100.00	m3				1,178,251			
Per Unit Price		1.00	m3				11,783	0	0	

02- 61 Productivity correction coefficient: Labour coefficient depending on machine coefficient Machine coefficient General

Asia

Item : Yard Stabilization Reference H24MLIT 52

Specification : t= 100cm Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 127 m2 / day * 0.75	95.25								
Foreman		1.05	person	21,870.00			22,960.63			Lab-1
Skilled Labour		1.05	person	14,580.00			15,307.09			Labour-4
Unskilled Labour		1.05	person	12,150.00			12,755.91			Lab-21
Cement	*1.3 for packing	6.00	t	109,980.00	0.00	0	659,880.00	(0.00)	0	Mat-53
Backhoe	Crawler type0.8m3 (Full bucket0.6m3)	1.05	day	304,207.27			319,377.71			OPE-13
振動ローラ	搭載式 コンバインド型 3～4t	1.05	day	108,640.00	0.00	0	114,057.74	(0.00)	0	ERN_21
Miscellaneous cost	Subtotal(Labour cost,machine expense) × 7 %	0.07		484,459.08			33,912.14			
Subtotal		100.00	m3				1,178,251			
Per Unit Price		1.00	m3				11,783	0	0	

02- 62

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Potal Crane Railway Foundation

Reference JICA study team

Specification : Concrete(including excavation, form, backfill)

Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

02- 63 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Potal Crane Railway Foundation Reference H28MLIT 804

Specification : Rail (30 kg / m) Quantity・Unit : 10 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	3.5 day /100m									
Foreman for Bridges	= 0.6 person * 2.5	1.50	person	44,100.00			66,150.00			Lab-2
Skilled Labour for Bridges	= 2.0 person * 2.5	5.00	person	29,400.30			147,001.50			Lab-8
Unskilled Labour	= 0.7 person * 2.5	1.75	person	12,150.00			21,262.50			Lab-21
Rail	30 kg / m	10.00	m	0	0	0	0.00	(0.00)	0.00	Mat-77
Depreciation	70%	(0.70)		0	0	0	0.00	(0.00)	0.00	
Subtotal		10.00	m				234,414			
Per Unit Price		1.00	m				23,441	0	0	

02- 64 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Base concrete Reference JICA study team

Specification : For stock yard under planned alignment Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

02- 65 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Base concrete Reference JICA study team

Specification : For segment casting equipment Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

02- 66 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Base concrete Reference JICA study team

Specification : For re-bar assembling yard Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

02- 67

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Base concrete

Reference JICA study team

Specification : For tower crane

Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Concrete										
Concrete work(1)	18N/mm2	10.60	m3	95,194.45	0.00	0.00	1,009,061.17	(0.00)	0.00	00-52
Excavation										
Excavation&Loading	Loose sand_Backhoe・Full bucket0.6m3	12.00	m3	1,154.49	0.00	0	13,853.88	(0.00)	0.00	00-4
Form										
Form work	for level concrete	2.00	m2	448.11	0.00	0	896.22	(0.00)	0.00	01-24
Back filling										
Backfilling	Class_D,W1 < 1m,Suitable soil	2.50	m3	6,427.46	0.00	0	16,068.65	(0.00)	0.00	00-120
Subtotal		10.00	m3				1,039,880			
Per Unit Price		1.00	m3				103,988	0	0	

02- 70 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Portal crane assembly and demolition Reference H28BE_ 482, 536

Specification : 60 t Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	Daily Productivity = 3.29 t/day	11.25	days							
Foreman for Bridges	1person * 2.5 * days	28.13	person	44,100.00			1,240,312.50			Lab-2
Skilled Labour for Bridges	6person * 2.5 * days	168.75	person	29,400.30			4,961,300.63			Lab-8
Unskilled Labour	1person * 2.5 * days	28.13	person	12,150.00			341,718.75			Lab-21
Electric worker		8.00	person	21,870.00			174,960.00			Lab-7
Miscellaneous cost	3.0% of sum of labor costs	0.03		6,718,291.88	0.00	0	201,548.76	(0.00)	0.00	
Rough terrain crane hire	25 t	11.25	day	232,008.00	0.00		2,610,090.00	(0.00)		OPE-27
Erection tool		11.25	day			5,470			61,537.50	Ref. P536
Frame	37 t	37.00	t							Mat-310
Moving Equipment	60t, Power 7.5kwx2	4.00	nos							Mat-311
Hoist (Winch)	60t	4.00	nos							Mat-312
Subtotal		1.00	set				9,529,931		61,538	
Per Unit Price		1.00	set				9,529,931	0	61,538	

02- 71

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Equipment of Portal crane

Reference H28BE_ 482

Specification : 60 t

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Frame	37 t	37.00	t	0	3,891	0	0	143,963	0	Mat-310
Moving Equipment	60t, Power 7.5kwx2	1.00	nos		98,665	0		(98,665.02)	0	Mat-311
Hoist (Winch)	60t	1.00	nos		151,976	0		(151,975.95)	0	Mat-312
Depreciation	70%	(0.70)		0	394,604	0	0	(276,223.06)	0.00	
Subtotal		1.00	set					118,381		
Per Unit Price		1.00	set				0	118,381	0	

02- 72

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Reinforcement assembly stand

Reference H28BE_ 609

Specification :

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Side frame	H-100*100*6/8	4.983	t	0	0	66,600	0	0	331,860	
	H-200*200*8/12	3.500	t	0	0	64,800	0	0	226,818	
	L-50*50*6	1.682	t	0	0	63,900	0	0	107,459	
	L-75*75*6	0.475	t	0	0	63,900	0	0	30,327	
Bottom Frame	H-200*200*8/12	3.091	t	0	0	64,800	0	0	200,296	
	L-50*50*6	0.379	t	0	0	63,900	0	0	24,210	
	L-75*75*6	0.084	t	0	0	63,900	0	0	5,343	
Inner Frame cart	H-400*400*13/21	1.062	t	0	0	69,300	0	0	73,609	
	H-400*200*8/13	0.512	t	0	0	64,800	0	0	33,190	
	H-200*200*8/12	0.635	t	0	0	64,800	0	0	41,151	
	H-100*100*6/8	0.204	t	0	0	66,600	0	0	13,594	
	[-250*90*9/13	0.061	t	0	0	64,800	0	0	3,960	
	L-100*100*10	0.077	t	0	0	66,600	0	0	5,119	
	L-65*65*6	0.033	t	0	0	63,900	0	0	2,093	
	L-50*50*6	0.043	t	0	0	63,900	0	0	2,778	
Depreciation	70%	(0.70)		0	0	1,101,807	0	0	(771,265)	
Direct labor cost	(Factory direct)	134.57	person	18,900			2,543,282			Lab-49
Secondary labor costs	32.2% appropriation of a direct labor cost	0.322		2,543,282			818,937			
Subtotal		1.00	set				3,362,219		330,542	
Per Unit Price		1.00	set				3,362,219	0	330,542	

02- 73

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Reinforcement assembly stand equipment

Reference

Specification :

Quantity・Unit : 1 day

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Journal jack	25t×250ST×2	2.00	day			612			1,224.00	
Tilttank	4t type6×6	6.00	day			2,000			12,000.00	
Tilthole	1.6 t Both-way traction type×4	4.00	day			2,880			11,520.00	
Subtotal		1.00	day						24,744	
Per Unit Price		1.00	day				0	0	24,744	

02- 74 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reinforcement assembly stand assembly Reference H28BE_ 171

Specification : Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 27.1 ton / (0.032 * (27.1 ton +20)	18.0	t /day							
	= 27.1 / Daily productivity	1.5	day							
Foreman for Bridges	1 person * 1.5day * 2.5	3.75	person	44,100.00			165,375.00			Lab-2
Skilled Labour for Bridges	5 person * 1.5day * 2.5	18.75	person	29,400.30			551,255.63			Lab-8
Unskilled Labour	1 person * 1.5day * 2.5	3.75	person	12,150.00			45,562.50			Lab-21
Miscellaneous cost	4.0% of labor costs	0.04		762,193.13	0.00	0	30,487.73	(0.00)	0.00	
Rough terrain crane	hydraulic 16t hung	1.51	day	181,398.56	0.00		273,105.61	(0.00)		OPE-10
Subtotal		1.00	set				1,065,786			
Per Unit Price		1.00	set				1,065,786	0	0	

02- 75 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reinforcement assembly stand instllation Reference H28MLIT 293

Specification : Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.7 person * 2.5	4.25	person	44,100.00			187,425.00			Lab-2
Skilled Labour for Bridges	4.2 person * 2.5	10.50	person	29,400.30			308,703.15			Lab-8
Welder	1.1 person * 2.5	2.75	person	19,440.00			53,460.00			Lab-17
Unskilled Labour	2.6 person * 2.5	6.50	person	12,150.00			78,975.00			Lab-21
Miscellaneous cost	28.0% of labor costs	0.28		628,563.15	0.00	0	175,997.68	(0.00)	0.00	
Rough terrain crane	hydraulic 25t hung	1.50	day	232,008.00	0.00		348,012.00	(0.00)		OPE-27
Subtotal		10.00	t				1,152,573			
Per Unit Price		1.00	t				115,257	0	0	

02- 76 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Reinforcement assembly stand removal Reference H28MLIT 293

Specification : Quantity・Unit : 10 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.1 person * 2.5	2.75	person	44,100.00			121,275.00			Lab-2
Skilled Labour for Bridges	3.0 person * 2.5	7.50	person	29,400.30			220,502.25			Lab-8
Welder	1.0 person * 2.5	2.50	person	19,440.00			48,600.00			Lab-17
Unskilled Labour	1.4 person * 2.5	3.50	person	12,150.00			42,525.00			Lab-21
Miscellaneous cost	1.0 % of labor costs	0.01		432,902.25	0.00	0	4,329.02	(0.00)	0.00	
Rough terrain crane	hydraulic 25t hung	1.50	day							
Subtotal		10.00	t				437,231			
Per Unit Price		1.00	t				43,723	0	0	

02- 80 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Short line equipment installation removal Reference H28BE_ 159

Specification : Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	= 1.0 t / (0.14 * 1.0 t + 1.0)	0.88	t / day							
Required days	= 1.0 t / daily productivity	1.14	days							
Foreman for Bridges	1.0 person * 1.14 * 2.5	2.85	person	44,100.00			125,685.00			Lab-2
Skilled Labour for Bridges	5.0 person * 1.14 * 2.5	14.25	person	29,400.30			418,954.28			Lab-8
Unskilled Labour	1.0 person * 1.14 * 2.5	2.85	person	12,150.00			34,627.50			Lab-21
Erection tool	1.14*1.5 (P180 table 2-5-41)	1.71	day			5,470			9,353.70	Ref. P536
Truck crane hire	hydraulic 35~36t hung	1.14	day							
Subtotal		1.00	t				579,267		9,354	
Per Unit Price		1.00	t				579,267	0	9,354	

02- 81

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Side form equipment

Reference

Specification : Side form main part

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.12	t	0	0.00	103,500	0	0	115,920	Mat-197
Steel plate	t=9.0mm	2.98	t	0	0.00	103,500	0	0	308,430	Mat-140
Steel plate	t=12.0mm	0.24	t	0	0.00	103,500	0	0	24,840	Mat-140
Steel plate	t=22.0mm	0.19	t	0	0.00	103,500	0	0	19,665	Mat-140
Flat bar	6×50	0.01	t	0	0.00	79,200	0	0	792	Mat-199
Flat bar	9×100	0.07	t	0	0.00	79,200	0	0	5,544	Mat-200
Equal-leg angle	65×65×6	0.12	t	0	0.00	63,900	0	0	7,668	Mat-194
Equal-leg angle	90×90×10	0.08	t	0	0.00	68,400	0	0	5,472	Mat-196
Stripe steel plat	t=4.5mm	0.28	t	0	0.00	83,700	0	0	23,436	Mat-248
Channel	100×50×5	0.21	t	0	0.00	64,800	0	0	13,608	Mat-209
STK steel pipe	φ48.6×2.3	0.05	t	0	0.00	95,400	0	0	4,770	Mat-258
STK steel pipe	φ60.5×2.3	0.01	t	0	0.00	95,400	0	0	954	Mat-259
Round bar	φ19	0.03	t	0	0.00	80,100	0	0	2,403	Mat-237
Depreciation	70%	(0.70)		0	0	533,502	0	0	(373,451)	
Subtotal		1.00	LS						160,051	
Per Unit Price		1.00	LS				0	0	160,051	

02- 82

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Side form equipment

Reference

Specification : Side form support beam

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=9.0mm	0.18	t	0	0.00	103,500	0	0	18,630	Mat-140
Steel plate	t=16.0mm	0.31	t	0	0.00	103,500	0	0	32,085	Mat-140
Stripe steel plat	t=4.5mm	0.14	t	0	0.00	83,700	0	0	11,718	Mat-248
Flat bar	6×50	0.03	t	0	0.00	79,200	0	0	2,376	Mat-199
Equal-leg angle	75×75×9	0.19	t	0	0.00	63,900	0	0	12,141	Mat-195
Equal-leg angle	50×50×6	0.05	t	0	0.00	63,900	0	0	3,195	Mat-193
Steel-square-bar pipe	175×175×6	0.67	t	0	0.00	83,700	0	0	56,079	Mat-251
H beam	200×200×8/12	1.46	t	0	0.00	64,800	0	0	94,608	Mat-178
STK steel pipe	φ48.6×2.3	0.10	t	0	0.00	95,400	0	0	9,540	Mat-258
STK steel pipe	φ60.5×2.3	0.02	t	0	0.00	95,400	0	0	1,908	Mat-259
Depreciation	70%	(0.70)		0	0	242,280	0	0	(169,596)	
Subtotal		1.00	LS						72,684	
Per Unit Price		1.00	LS				0	0	72,684	

02- 83 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Side form equipment Reference

Specification : Frame of Side form Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=9.0mm	0.07	t	0	0.00	103,500	0	0	7,245	Mat-140
Channel	200×90×8	0.37	t	0	0.00	64,800	0	0	23,976	Mat-211
H beam	200×200×8/12	0.34	t	0	0.00	64,800	0	0	22,032	Mat-178
H beam	250×250×9/14	0.44	t	0	0.00	64,800	0	0	28,512	Mat-175
H beam	500×200×10/16	0.63	t	0	0.00	66,600	0	0	41,958	Mat-182
Depreciation	70%	(0.70)		0	0	123,723	0	0	(86,606)	
Subtotal		1.00	LS						37,117	
Per Unit Price		1.00	LS				0	0	37,117	

02- 84

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bottom form equipment

Reference

Specification : Bottom form L=3.000

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=6.0mm	1.22	t	0	0.00	103,500	0	0	126,270	Mat-140
Steel plate	t=32.0mm	0.14	t	0	0.00	103,500	0	0	14,490	Mat-140
Steel plate	t=12.0mm	0.08	t	0	0.00	103,500	0	0	8,280	Mat-140
Flat bar	9×100	1.35	t	0	0.00	79,200	0	0	106,920	Mat-200
Flat bar	12×90	0.07	t	0	0.00	79,200	0	0	5,544	Mat-204
Flat bar	12×100	0.25	t	0	0.00	79,200	0	0	19,800	Mat-205
Equal-leg angle	75×75×9	0.21	t	0	0.00	63,900	0	0	13,419	Mat-195
Depreciation	70%	(0.70)		0	0	294,723	0	0	(206,306)	
Subtotal		1.00	LS						88,417	
Per Unit Price		1.00	LS				0	0	88,417	

02- 85

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bottom form equipment

Reference

Specification : Bottom frame support beam (for L=3.000m)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H steel	300×150×6.5/9	2.42	t	0.00	0.00	64,800	0	0	156,816	Mat-179
H steel	100×100×6/8	0.42	t	0.00	0.00	66,600	0	0	27,972	Mat-168
Steel-square-bar pipe	100×100×4.5	0.35	t	0.00	0.00	79,200	0	0	27,720	Mat-250
Steel-square-bar pipe	100×50×3.2	0.13	t	0.00	0.00	76,500	0	0	9,945	Mat-252
H beam	350×350×12/19	1.11	t	0.00	0.00	66,600	0	0	73,926	Mat-177
H beam	350×175×7/11	0.20	t	0.00	0.00	64,800	0	0	12,960	Mat-180
Steel plate	t=9.0mm	0.28	t	0.00	0.00	103,500	0	0	28,980	Mat-140
Steel plate	t=16.0mm	0.18	t	0.00	0.00	103,500	0	0	18,630	Mat-140
Steel plate	t=12.0mm	0.08	t	0.00	0.00	103,500	0	0	8,280	Mat-140
Round bar	φ40	0.03	t	0.00	0.00	81,900	0	0	2,457	Mat-239
Depreciation	70%	(0.70)		0	0	367,686	0	0	(257,380)	
Subtotal		1.00	LS						110,306	
Per Unit Price		1.00	LS				0	0	110,306	

02- 86

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bottom form equipment

Reference

Specification : Frame of bottom form (for L=3.0m)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks	
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)		
Steel plate	t=9.0mm	0.06	t	0.00	0.00	103,500	0	0	6,210	Mat-140	
Steel plate	t=12.0mm	0.22	t	0.00	0.00	103,500	0	0	22,770	Mat-140	
Steel plate	t=22.0mm	0.24	t	0.00	0.00	103,500	0	0	24,840	Mat-140	
Steel plate	t=25.0mm	0.14	t	0.00	0.00	103,500	0	0	14,490	Mat-140	
Steel plate	t=70.0mm	0.43	t	0.00	0.00	113,000	0	0	48,590	Mat-140	+9500JP
H steel	250×250×9/14	1.65	t	0.00	0.00	64,800	0	0	106,920	Mat-175	
Equal-leg angle	100×100×10	0.23	t	0.00	0.00	68,400	0	0	15,732	Mat-191	
Steel-square-bar pipe	175×175×6	0.04	t	0.00	0.00	83,700	0	0	3,348	Mat-251	
Round bar	φ200	0.21	t	0.00	0.00	90,900	0	0	19,089	Mat-247	
Round bar	φ130	0.38	t	0.00	0.00	90,900	0	0	34,542	Mat-246	
Depreciation	70%	(0.70)		0	0	296,531	0	0	(207,572)		
Subtotal		1.00	LS						88,959		
Per Unit Price		1.00	LS				0	0	88,959		

02- 87

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bottom form equipment

Reference

Specification : Bottom form pillar (replacement type)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Column	200×200×6	7.36	t	0.00	0.00	81,000	0	0	596,160	Mat-253
Depreciation	70%	(0.70)		0	0	596,160	0	0	(417,312)	
Subtotal		1.00	LS						178,848	
Per Unit Price		1.00	LS				0	0	178,848	

02- 88

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bottom form equipment

Reference

Specification : Bottom form rail material

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=9.0mm	0.58	t	0	0.00	103,500	0	0	60,030	Mat-140
Steel plate	t=12.0mm	0.67	t	0	0.00	103,500	0	0	69,345	Mat-140
Steel plate	t=16.0mm	0.62	t	0	0.00	103,500	0	0	64,170	Mat-140
Steel plate	t=32.0mm	2.09	t	0	0.00	103,500	0	0	216,315	Mat-140
H steel	250×250×9/14	3.99	t	0.00	0.00	64,800	0	0	258,552	Mat-175
Round bar	φ19	0.12	t	0.00	0.00	80,100	0	0	9,612	Mat-237
Depreciation	70%	(0.70)		0	0	678,024	0	0	(474,617)	
Subtotal		1.00	LS						203,407	
Per Unit Price		1.00	LS				0	0	203,407	

02- 89

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form type-1

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.11	t	0.00	0.00	103,500	0	0	114,885	Mat-197
Steel plate	t=9.0mm	0.60	t	0.00	0.00	103,500	0	0	62,100	Mat-140
Steel plate	t=12.0mm	0.13	t	0.00	0.00	103,500	0	0	13,455	Mat-140
Flate bar	9×150	5.97	t	0.00	0.00	81,000	0	0	483,570	Mat-202
Flate bar	9×125	1.77	t	0.00	0.00	79,200	0	0	140,184	Mat-201
Equal-leg angle	75×75×9	0.06	t	0.00	0.00	63,900	0	0	3,834	Mat-195
Equal-leg angle	100×100×10	0.17	t	0.00	0.00	68,400	0	0	11,628	Mat-191
H beam	150×150×7/10	0.49	t	0.00	0.00	64,800	0	0	31,752	Mat-173
H beam	200×100×5.5/8	0.35	t	0.00	0.00	64,800	0	0	22,680	Mat-178
Round bar	φ50	0.14	t	0.00	0.00	82,800	0	0	11,592	Mat-240
Round bar	φ80	0.15	t	0.00	0.00	90,000	0	0	13,500	Mat-242
Round bar	φ30	0.11	t	0.00	0.00	81,000	0	0	8,910	Mat-238
Depreciation	70%	(0.70)		0	0	918,090	0	0	(642,663)	
Subtotal		1.00	LS						275,427	
Per Unit Price		1.00	LS				0	0	275,427	

02- 90

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form type-2

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.43	t	0.00	0.00	103,500	0	0	148,005	Mat-197
Steel plate	t=9.0mm	0.77	t	0.00	0.00	103,500	0	0	79,695	Mat-140
Steel plate	t=12.0mm	0.17	t	0.00	0.00	103,500	0	0	17,595	Mat-140
Flate bar	9×150	7.69	t	0.00	0.00	81,000	0	0	622,890	Mat-202
Flate bar	9×125	2.27	t	0.00	0.00	79,200	0	0	179,784	Mat-201
Equal-leg angle	75×75×9	0.07	t	0.00	0.00	63,900	0	0	4,473	Mat-195
Equal-leg angle	100×100×10	0.22	t	0.00	0.00	68,400	0	0	15,048	Mat-191
H beam	150×150×7/10	0.64	t	0.00	0.00	64,800	0	0	41,472	Mat-173
H beam	200×100×5.5/8	0.45	t	0.00	0.00	64,800	0	0	29,160	Mat-178
Round bar	φ50	0.18	t	0.00	0.00	82,800	0	0	14,904	Mat-240
Round bar	φ80	0.19	t	0.00	0.00	90,000	0	0	17,100	Mat-242
Round bar	φ30	0.15	t	0.00	0.00	81,000	0	0	12,150	Mat-238
Depreciation	70%	(0.70)		0	0	1,182,276	0	0	(827,593)	
Subtotal		1.00	LS						354,683	
Per Unit Price		1.00	LS				0	0	354,683	

02- 91 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Inner form equipment Reference

Specification : Inner form type-3 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.10	t	0.00	0.00	103,500	0	0	113,850	Mat-197
Steel plate	t=9.0mm	0.59	t	0.00	0.00	103,500	0	0	61,065	Mat-140
Steel plate	t=12.0mm	0.13	t	0.00	0.00	103,500	0	0	13,455	Mat-140
Flate bar	9×150	5.92	t	0.00	0.00	81,000	0	0	479,520	Mat-202
Flate bar	9×125	1.75	t	0.00	0.00	79,200	0	0	138,600	Mat-201
Equal-leg angle	75×75×9	0.06	t	0.00	0.00	63,900	0	0	3,834	Mat-195
Equal-leg angle	100×100×10	0.17	t	0.00	0.00	68,400	0	0	11,628	Mat-191
H beam	150×150×7/10	0.49	t	0.00	0.00	64,800	0	0	31,752	Mat-173
H beam	200×100×5.5/8	0.35	t	0.00	0.00	64,800	0	0	22,680	Mat-178
Round bar	φ50	0.14	t	0.00	0.00	82,800	0	0	11,592	Mat-240
Round bar	φ80	0.15	t	0.00	0.00	90,000	0	0	13,500	Mat-242
Round bar	φ30	0.11	t	0.00	0.00	81,000	0	0	8,910	Mat-238
Depreciation	70%	(0.70)		0	0	910,386	0	0	(637,270)	
Subtotal		1.00	LS						273,116	
Per Unit Price		1.00	LS				0	0	273,116	

02- 92

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form type-4

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.11	t	0.00	0.00	103,500	0	0	114,885	Mat-197
Steel plate	t=9.0mm	0.59	t	0.00	0.00	103,500	0	0	61,065	Mat-140
Steel plate	t=12.0mm	0.13	t	0.00	0.00	103,500	0	0	13,455	Mat-140
Flate bar	9×150	5.96	t	0.00	0.00	81,000	0	0	482,760	Mat-202
Flate bar	9×125	1.76	t	0.00	0.00	79,200	0	0	139,392	Mat-201
Equal-leg angle	75×75×9	0.06	t	0.00	0.00	63,900	0	0	3,834	Mat-195
Equal-leg angle	100×100×10	0.17	t	0.00	0.00	68,400	0	0	11,628	Mat-191
H beam	150×150×7/10	0.49	t	0.00	0.00	64,800	0	0	31,752	Mat-173
H beam	200×100×5.5/8	0.35	t	0.00	0.00	64,800	0	0	22,680	Mat-178
Round bar	φ50	0.14	t	0.00	0.00	82,800	0	0	11,592	Mat-240
Round bar	φ80	0.15	t	0.00	0.00	90,000	0	0	13,500	Mat-242
Round bar	φ30	0.11	t	0.00	0.00	81,000	0	0	8,910	Mat-238
Depreciation	70%	(0.70)		0	0	915,453	0	0	(640,817)	
Subtotal		1.00	LS						274,636	
Per Unit Price		1.00	LS				0	0	274,636	

02- 93

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form type-5

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.01	t	0.00	0.00	103,500	0	0	104,535	Mat-197
Steel plate	t=9.0mm	0.54	t	0.00	0.00	103,500	0	0	55,890	Mat-140
Steel plate	t=12.0mm	0.12	t	0.00	0.00	103,500	0	0	12,420	Mat-140
Flate bar	9×150	5.41	t	0.00	0.00	81,000	0	0	438,210	Mat-202
Flate bar	9×125	1.60	t	0.00	0.00	79,200	0	0	126,720	Mat-201
Equal-leg angle	75×75×9	0.05	t	0.00	0.00	63,900	0	0	3,195	Mat-195
Equal-leg angle	100×100×10	0.15	t	0.00	0.00	68,400	0	0	10,260	Mat-191
H beam	150×150×7/10	0.45	t	0.00	0.00	64,800	0	0	29,160	Mat-173
H beam	200×100×5.5/8	0.32	t	0.00	0.00	64,800	0	0	20,736	Mat-178
Round bar	φ50	0.12	t	0.00	0.00	82,800	0	0	9,936	Mat-240
Round bar	φ80	0.13	t	0.00	0.00	90,000	0	0	11,700	Mat-242
Round bar	φ30	0.10	t	0.00	0.00	81,000	0	0	8,100	Mat-238
Depreciation	70%	(0.70)		0	0	830,862	0	0	(581,603)	
Subtotal		1.00	LS						249,259	
Per Unit Price		1.00	LS				0	0	249,259	

02- 94

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form support beam

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=12.0mm	0.40	t	0	0.00	103,500	0	0	41,400	Mat-140
Steel plate	t=16.0mm	0.05	t	0	0.00	103,500	0	0	5,175	Mat-140
Steel plate	t=19.0mm	0.14	t	0	0.00	103,500	0	0	14,490	Mat-140
Equal-leg angle	100×100×10	0.21	t	0.00	0.00	68,400	0	0	14,364	Mat-191
H beam	150×150×7/10	1.02	t	0.00	0.00	64,800	0	0	66,096	Mat-173
H beam	200×100×5.5/8	0.25	t	0	0.00	64,800	0	0	16,200	Mat-178
H beam	300×150×6.5/9	0.50	t	0	0.00	64,800	0	0	32,400	Mat-179
H beam	300×300×10/15	0.23	t	0	0.00	64,800	0	0	14,904	Mat-176
H beam	400×200×9/14	2.50	t	0	0.00	64,800	0	0	162,000	Mat-181
Round bar	φ40	0.04	t	0	0.00	81,900	0	0	3,276	Mat-239
Round bar	φ60	0.04	t	0	0.00	87,300	0	0	3,492	Mat-241
Round bar	φ90	0.04	t	0	0.00	90,000	0	0	3,600	Mat-243
Round bar	φ120	0.10	t	0	0.00	90,900	0	0	9,090	Mat-244
Round bar	φ150	0.49	t	0	0.00	90,900	0	0	44,541	Mat-246
Depreciation	70%	(0.70)		0	0	431,028	0	0	(301,720)	
Subtotal		1.00	LS						129,308	
Per Unit Price		1.00	LS				0	0	129,308	

02- 95

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form move cart

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=9.0mm	0.28	t	0	0.00	103,500	0	0	28,980	Mat-140
Steel plate	t=12.0mm	0.21	t	0	0.00	103,500	0	0	21,735	Mat-140
Steel plate	t=16.0mm	0.13	t	0	0.00	103,500	0	0	13,455	Mat-140
Stripe steel plate	t=4.5mm	0.30	t	0	0.00	83,700	0	0	25,110	Mat-248
Equal-leg angle	75×75×9	0.27	t	0.00	0.00	63,900	0	0	17,253	Mat-195
Equal-leg angle	100×100×10	0.10	t	0.00	0.00	68,400	0	0	6,840	Mat-191
Channel	100×50×5/7.5	0.01	t	0.00	0.00	64,800	0	0	648	Mat-209
Channel	200×90×8/13.5	0.00	t	0.00	0.00	64,800	0	0	0	Mat-211
H beam	200×100×5.5/8	0.04	t	0.00	0.00	64,800	0	0	2,592	Mat-178
H beam	200×200×8/12	1.46	t	0.00	0.00	64,800	0	0	94,608	Mat-174
Depreciation	70%	(0.70)		0	0	211,221	0	0	(147,855)	
Subtotal		1.00	LS						63,366	
Per Unit Price		1.00	LS				0	0	63,366	

02- 96

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : Inner form rail material

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=9.0mm	0.24	t	0	0.00	103,500	0	0	24,840	Mat-140
Steel plate	t=12.0mm	0.52	t	0	0.00	103,500	0	0	53,820	Mat-140
Steel plate	t=19.0mm	0.45	t	0.00	0.00	103,500	0	0	46,575	Mat-140
Channel	150×75×6.5/10	0.20	t	0.00	0.00	64,800	0	0	12,960	Mat-210
H beam	250×250×9/14	1.72	t	0.00	0.00	64,800	0	0	111,456	Mat-175
Round bar	φ19	0.07	t	0.00	0.00	80,100	0	0	5,607	Mat-237
Depreciation	70%	(0.70)		0	0	255,258	0	0	(178,681)	
Subtotal		1.00	LS						76,577	
Per Unit Price		1.00	LS				0	0	76,577	

02- 97

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Inner form equipment

Reference

Specification : lateral beam parts of Inner form

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	0.79	t	0	0.00	103,500	0	0	81,765	Mat-197
Steel plate	t=9.0mm	0.21	t	0.00	0.00	103,500	0	0	21,735	Mat-140
Flat bar	9×150	1.51	t	0.00	0.00	81,000	0	0	122,310	Mat-202
Flat bar	9×125	0.89	t	0.00	0.00	79,200	0	0	70,488	Mat-201
Equal-leg angle	100×100×10	0.53	t	0.00	0.00	68,400	0	0	36,252	Mat-191
H steel	150×150×7/10	1.39	t	0.00	0.00	64,800	0	0	90,072	Mat-173
Channel	200×90×8/13.5	0.48	t	0.00	0.00	64,800	0	0	31,104	Mat-211
H steel	200×100×5.5/8	0.22	t	0.00	0.00	64,800	0	0	14,256	Mat-178
H steel	200×200×8/12	3.44	t	0.00	0.00	64,800	0	0	222,912	Mat-174
H steel	400×200×8/13	3.19	t	0.00	0.00	64,800	0	0	206,712	Mat-181
Depreciation	70%	(0.70)		0	0	897,606	0	0	(628,324)	
Subtotal		1.00	LS						269,282	
Per Unit Price		1.00	LS				0	0	269,282	

02- 98

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Edge form equipment

Reference

Specification : Edge form main part

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Steel plate	t=4.5mm	1.09	t	0	0.00	103,500	0	0	112,815	Mat-197
Flat bar	9×200	4.02	t	0	0.00	81,000	0	0	325,620	Mat-203
Depreciation	70%	(0.70)		0	0	438,435	0	0	(306,905)	
Subtotal		1.00	LS						131,531	
Per Unit Price		1.00	LS				0	0	131,531	

02- 99

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Edge form equipment

Reference

Specification : Frame of edge form

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H beam	250×250×9/14	6.32	t	0	0.00	64,800	0	0	409,536	Mat-175
H beam	350×175×7/11	1.26	t	0	0.00	64,800	0	0	81,648	Mat-180
Depreciation	70%	(0.70)		0	0	491,184	0	0	(343,829)	
Subtotal		1.00	LS						147,355	
Per Unit Price		1.00	LS				0	0	147,355	

02- 100 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Short line hydraulic-machines cost of equipment Reference

Specification : Quantity · Unit : 1 day

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Hydraulic-machines equipment hire for beam separation										
Hydraulic Jack	for beam separation 100t×50st×2	1.00	day			2,620			2,620	
Electric hydraulic system pump	2 linkage 2.2 kW×1	1.00	day			3,600			3,600	
Hydraulic-machines equipment hire for inner frames										
Hydraulic Jack	For inner frame opening and closing 20t×200st×4	1.00	day			2,100			2,100	
Hydraulic Jack	For inner frame slide 20t×350st×4	1.00	day			2,100			2,100	
Hydraulic Jack	For front support 10t×800st×2	1.00	day			1,050			1,050	
Hydraulic Jack	Inner frame vertical adjustment 20t×150st×2	1.00	day			1,050			1,050	
Hydraulic Jack	Inner frame horizontal adjustment 20t×150st×2	1.00	day			1,050			1,050	
Valve stand - operator control panel, an electr	control capability 20 sets	1.00	day			4,960			4,960	
Tilt tank	50t type 6×6	1.00	day			2,946			2,946	
Electric hydraulic pressure tilt Hall	1.6t×1	1.00	day			2,030			2,030	
Hydraulic-machines equipment hire for carts										
Hydraulic Jack	For cart jack-up 100t×100st×4	1.00	day			5,240			5,240	
Hydraulic Jack	For cart level 50t×100st×2	1.00	day			1,758			1,758	
Valve stand - operator control panel, an electr	7.5KW×1	1.00	day			4,960			4,960	
Tilt tank	75t type 6×4	1.00	day			2,428			2,428	
Electric hydraulic pressure tilt Hall	3.2t×2	1.00	day			10,040			10,040	
Hydraulic-machines equipment hire for bottom frames										
Hydraulic Jack	For bottom frame center support 100t×50st 2set	1.00	day			2,620			2,620	
Hydraulic-machines equipment hire for side frames										
Hydraulic Jack	For side frame holds down 20t×150st×12	1.00	day			6,300			6,300	
Valve stand - operator control panel, an electr	3.7KW×2	1.00	day			9,920			9,920	
Depreciation	70%	(0.70)		0	0	66,772	0	0	(46,740)	
Subtotal		1.00	day						20,032	
Per Unit Price		1.00	day				0	0	20,032	

02- 105 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Erection Girder (Main) Reference JICA study team

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Lowe Girder Box	1200x500x40x19	108.22	MT			445,000			48,156,120	
Upper Girder Box	500x500x22x19	46.76	MT			445,000			20,808,200	
Truss Members	H-500x400x22x12x4400	42.77	MT	2,175,192			93,028,625			
Cross Beam	H-500x400x22x12x4400	23.04	MT	2,175,192			50,116,431			
Bracing Member	L-130x130x12x3000	29.16	MT	1,495,445			43,607,168			
Blacket	2.0m Pitch	38.76	MT			445,000			17,248,200	
Lateral Beam	H-450x250x12x28x2000	24.42	MT	2,175,192			53,118,196			
Support Reinforcement		16.00	MT			445,000			7,120,000	
Gussets, Splicing & Bolts		62.49	MT			445,000			27,806,270	
Subtotal		1.00	LS				239,870,419		121,138,790	
Per Unit Price		1.00	LS				239,870,419	0	121,138,790	

02- 106 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Embedded materials cost of Segment Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Embedded materials	Sheath for 12S15.2	4,639	m	0.00	0.00	631	0	0	2,926,745	Mat-418
Embedded materials	Sheath for 4S15.2	120	m	0.00	0.00	311	0	0	37,260	Mat-419
Embedded materials	Sheath for 3S12.7	9,728	m	0.00	0.00	311	0	0	3,020,544	Mat-420
Embedded materials	Sheath for PC Bar φ32	1,284	m	0.00	0.00	213	0	0	273,877	Mat-421
Embedded materials	Deviator pipe for 19S15.2at Deviator (L=0.812m)(SPG	240	nos	0.00	0.00	1,980	0	0	475,200	Mat-422
Embedded materials	Deviator pipe for 19S15.2at Support Crossbeam(L=1.6	32	nos	0.00	0.00	3,960	0	0	126,720	Mat-423
Embedded materials	Sleeve pipe for 19S15.2(SPG)	96	nos	0.00	0.00	4,590	0	0	440,640	Mat-424
Subtotal		1.00	LS						7,300,986	
Per Unit Price		1.00	LS				0	0	7,300,986	

02- 107 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Erection Nose Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Lowe Girder Box	500x500x22x19	17.57	MT			445,000			7,818,650.00	
Upper Girder Box	500x500x22x19	17.57	MT			445,000			7,818,650.00	
Truss Members	H-500x400x5000	7.20	MT	2,175,192.31			15,661,384.62			
Cross Beam	H-500x400x4500	4.05	MT	2,175,192.31			8,809,528.85			
Bracing Member	L-130x130x12x3000	6.66	MT	1,495,444.71			9,959,661.78			
Gussets, Splicing & Bolts		10.59	MT			445,000			4,710,325.00	
Front End Frame		4.00	4			445,000			1,780,000.00	
Subtotal		1.00	LS				34,430,575		22,127,625	
Per Unit Price		1.00	LS				34,430,575	0	22,127,625	

02- 108

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Girder Accessaries

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Crane Beam	I-13x450x175	13.80	MT			445,000			6,141,000	
Suspension Beam	H-500x400x4500	7.29	MT	2,175,192			15,857,152			
Side Walk		12.00	MT			445,000			5,340,000	
Subtotal		1.00	LS				15,857,152		11,481,000	
Per Unit Price		1.00	LS				15,857,152	0	11,481,000	

02- 109

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Segment Hoist Carriage

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Carriage Beam		43.20	MT			350,000			15,120,000.00	
Sliding Plate (Base)		12.80	MT			350,000			4,480,000.00	
Hoist Steel Bar		6.40	MT			400,000			2,560,000.00	
Temporary Hoist Clasp		6.40	MT			320,000			2,048,000.00	
Eyebar for Temporay Hoist Clasp		6.40	MT			320,000			2,048,000.00	
Segment Temporary Hoist Beam		32.00	MT			320,000			10,240,000.00	
Supporting Beam		6.40	MT			320,000			2,048,000.00	
Accessaries		4.80	MT			320,000			1,536,000.00	
Subtotal		1.00	LS						40,080,000	
Per Unit Price		1.00	LS				0	0	40,080,000	

02- 110 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Supporting Base Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Supporting Base Frame		12.00	MT			445,000			5,340,000.00	
Dobule Twin Jack	6RM-15040	5.92	MT			2,500,000			14,800,000.00	
Endless Sliding Equipment	ES-25030	13.60	MT			1,500,000			20,400,000.00	
Rear Roller Carriage		12.00	MT			750,000			9,000,000.00	
PC Strand	φ28.6mm	1,184.00	MT			335			396,640.00	
Rail Facilities	37kg base	150.00	m			25,200			3,780,000.00	
Side Walk/Ladder		1.20	MT			400,000			480,000.00	
Subtotal		1.00	LS						54,196,640	
Per Unit Price		1.00	LS				0	0	54,196,640	

02- 111 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Main Hoist Reference

Specification : Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main Hoist	40t, Lifting Height 24m	2.00	nos			14,220,000			28,440,000.00	
Lifting Frame		6.80	MT			400,000			2,720,000.00	
Fook & Swivel Equipment		1.50	MT			1,500,000			2,250,000.00	
Sebment Lifting Sling		4.00	nos			500,000			2,000,000.00	
Subtotal		1.00	LS						35,410,000	
Per Unit Price		1.00	LS				0	0	35,410,000	

02- 112

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Ancillary Equipment

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
5t Hiist Winch		1.20	MT			2,000,000			2,400,000	
Front End Support		6.00	MT			445,000			2,670,000	
Scaffolding		5.00	MT			200,000			1,000,000	
Oil Hydraulic Set*1		1.00	Set	0	0	108,560,000	0	0	108,560,000	02-113
Generator	150kva	2.90	MT			1,500,000			4,350,000	
Electric Wiring		1.00	LS			5,000,000			5,000,000	
Subtotal		1.00	LS						123,980,000	
Per Unit Price		1.00	LS				0	0	123,980,000	

02- 113

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Oil Hydraulic Set*1

Reference

Specification :

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Girder support Jack	400t x200mm stroke	4.00	Nos			2,660,000			10,640,000.00	
Hydraulic Pump Unit	11KW for Support	2.00	Nos			2,800,000			5,600,000.00	
Jack for Support Base	200tx200mm stroke	8.00	Nos			300,000			2,400,000.00	
Hydraulic Pump Unit	3.7KW	1.00	Nos			2,470,000			2,470,000.00	
Dobule Twin Jack	4RM-7030	4.00	Nos			4,500,000			18,000,000.00	
Hydralic Pump for abave	4LH-3.7P, 3.7kW	4.00	Nos			2,460,000			9,840,000.00	
Endress Sliding Jack	ES-25030	4.00	Nos			6,582,400			26,329,600.00	
Hydralic Pump for abave	EPS-11	2.00	Nos			9,285,000			18,570,000.00	
Hand-type Jack	HPW	8.00	Nos			258,800			2,070,400.00	
Jack for Segment Hoist	50tx200mm stroke	32.00	Nos			395,000			12,640,000.00	
Miscellanous tool	5% for Jacks									
Hydraulic Hoses	5% for Jacks									
Subtotal		1.00	LS						108,560,000	
Per Unit Price		1.00	LS				0	0	108,560,000	

02- 131 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Segment loading and transport Reference It is based on a IRABU bridge construction track record.

Specification : Segment loading Quantity・Unit : 1 SEG

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.0per * 2.5 * 0.11day	0.28	person	44,100.00			12,127.50			Lab-2
Skilled Labour for Bridges	2.0per * 2.5 * 0.11day	0.55	person	29,400.30			16,170.17			Lab-8
Unskilled Labour	4.0per * 2.5 * 0.11day	1.10	person	12,150.00			13,365.00			Lab-21
Erection tool	0.11day/0.442	0.25	day			5,470			1,361.31	Ref. P536
										H28 _ BE
Subtotal		1.00	SEG				41,663		1,361	
Per Unit Price		1.00	SEG				41,663	0	1,361	

02- 140 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Segment erection Reference Based on a IRABU bridge construction re

Specification : Span by span method Quantity・Unit : 2.5 SEG / day

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.0 person * 2.5	2.50	person	44,100.00			110,250.00			Lab-2
Skilled Labour for Bridges	6.0 person * 2.5	15.00	person	29,400.30			441,004.50			Lab-8
Unskilled Labour	4.0 person * 2.5	10.00	person	12,150.00			121,500.00			Lab-21
Erection tool	1/0.442	2.26	day			5,470			12,362.20	Ref. P536
										H28 _ BE
Subtotal		2.50	SEG / day				672,755		12,362	
Per Unit Price		1.00	SEG / day				269,102	0	4,945	

02- 141 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Segment erection and adjustment Reference Based on a IRABU bridge construction re

Specification : Quantity・Unit : 1 SEG

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.5 person * 2.5	1.25	person	44,100.00			55,125.00			Lab-2
Skilled Labour for Bridges	4.5 person * 2.5	11.25	person	29,400.30			330,753.38			Lab-8
Unskilled Labour	3.0 person * 2.5	7.50	person	12,150.00			91,125.00			Lab-21
Erection tool	1day/0.442	2.26	day			5,470			12,362.20	Ref. P536
										H28 _ BE
Subtotal		1.00	SEG				477,003		12,362	
Per Unit Price		1.00	SEG				477,003	0	12,362	

02- 142

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Pre cast beam Prestressed concrete bridge

Item : Adhesives coating

Reference Standard cost estimate P229

Specification : Both face coating

Quantity・Unit : 1 m2(both fa

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.02 person * 2.5	0.05	person	44,100.00			2,205.00			Lab-2
Skilled Labour for Bridges	0.1 person * 2.5	0.25	person	29,400.30			7,350.08			Lab-8
Unskilled Labour	0.3 person * 2.5	0.75	person	12,150.00			9,112.50			Lab-21
Adhesion material	Epoxy resin	1.50	kg			2,500			3,750.00	Mat-313
Subtotal		1.00	2(both face)				18,668		3,750	
Per Unit Price		1.00	2(both face)				18,668	0	3,750	

02- 150 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC steel bar installation Reference H28MLIT 818

Specification : (SBPR 930/1180 φ32mm) Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.6 person * 2.5	4.00	person	44,100			176,400			Lab-2
Skilled Labour for Bridges	13.6 person * 2.5	34.00	person	29,400			999,610			Lab-8
Unskilled Labour	7.5 person * 2.5	18.75	person	12,150			227,813			Lab-21
Miscellaneous cost	7.0% of sum of labor costs	0.07		1,403,823	0	0	98,268	0	0	
Rough terrain crane hire	hydraulic 25t hung	0.50	day	232,008	0		116,004	0		OPE-27
PC bar	SBPR 930/1180 φ32mm(3m)	1.06	ton	0	0	306,900	0	0	325,314	Mat-425
Subtotal		1.00	t				1,618,094		325,314	
Per Unit Price		1.00	t				1,618,094	0	325,314	

02- 151 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC steel bar fixation Reference H28MLIT 819

Specification : φ32 Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour for Bridges	1.1 person * 2.5	2.75	person	29,400.30			80,850.83			Lab-8
Miscellaneous cost	19% of labor cost	0.19		80,850.83			15,361.66			
*It is expenses of a grout-hose, a vinyl tape, and a binding wire.										
Subtotal		10.00	nos				96,212			
Per Unit Price		1.00	nos				9,621	0	0	

02- 152 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC steel bar strain Reference H28MLIT 819

Specification : φ32 Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	4.6 person * 2.5	11.50	person	29,400.30			338,103.45			Lab-8
Unskilled Labour	2.0 person * 2.5	5.00	person	12,150.00			60,750.00			Lab-21
Miscellaneous cost	4.0% of sum of labor costs	0.04		487,053.45	0.00	0	19,482.14	(0.00)	0.00	
Subtotal		10.00	nos				506,536			
Per Unit Price		1.00	nos				50,654	0	0	

02- 160 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : External PC cable Installation Reference H28BE_ 723

Specification : 19S15.2 Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.7 person * 2.5	1.75	person	44,100.00			77,175			Lab-2
Skilled Labour for Bridges	4.1 person * 2.5	10.25	person	29,400.30			301,353			Lab-8
Unskilled Labour	3.4 person * 2.5	8.50	person	12,150.00			103,275			Lab-21
Miscellaneous cost	29%	0.29		481,803.08	0.00	0	139,723	0	0	
PC Strand	19S15.2 (SWPR7BL)_External cable type	1,060.00	kg	0.00	0.00	671	0	0	710,730	Mat-426
Subtotal		1.00	t				621,526		710,730	
Per Unit Price		1.00	t				621,526	0	710,730	

02- 161 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Deviator pipe setting Reference H28BE_ 721

Specification : Deviator pipe for 19S15.2_0.812m Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	Length of deviator pipe	0.82	m							
Skilled Labour for Bridges	= length of deviator * 0.3 person / m * 2.5	0.62	person	29,400.30			18,081.18			Lab-8
Miscellaneous cost	6%	0.06		18,081.18	0.00	0	1,084.87	(0.00)	0.00	
*Deviator cost is counted on "02-106 Embedded materials cost of Segment"										
Subtotal		1.00	set				19,166			
Per Unit Price		1.00	set				19,166	0	0	

02- 162 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Prestressing(End of girder) Reference H28BE_ 722

Specification : 19S15.2 Quantity・Unit : 10 cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	4.4 person * 2.5	11.00	person	44,100.00			485,100.00			Lab-2
Skilled Labour for Bridges	17.1 person * 2.5	42.75	person	29,400.30			1,256,862.83			Lab-8
Unskilled Labour	7.0 person * 2.5	17.50	person	12,150.00			212,625.00			Lab-21
Miscellaneous cost	56%	0.56		1,954,587.83	0.00	0	1,094,569.18	(0.00)	0.00	
* including "Form for anchor, Spiral re-bar, Table for setting anchor, erectricity etc"										
Anchor	Anchor (ADnC15 Freyssine)	20.00	set	133,650.00	0.00	0	2,673,000.00	(0.00)	0.00	Mat-427
Subtotal		10.00	cable				5,722,157			
Per Unit Price		1.00	cable				572,216	0	0	

02- 163 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Prestressing(Inside of girder) Reference H28BE_ 722

Specification : 19S15.2 Quantity・Unit : 10 cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	5.9 person * 2.5	14.75	person	44,100.00			650,475.00			Lab-2
Skilled Labour for Bridges	21.7 person * 2.5	54.25	person	29,400.30			1,594,966.28			Lab-8
Unskilled Labour	8.7 person * 2.5	21.75	person	12,150.00			264,262.50			Lab-21
Miscellaneous cost	44%	0.44		2,509,703.78	0.00	0	1,104,269.66	(0.00)	0.00	
* including "Form for anchor, Spiral re-bar, Table for setting anchor, erectricity etc"										
Anchor	Anchor (ADnC15 Freyssine)	20.00	set	133,650.00	0.00	0	2,673,000.00	(0.00)	0.00	Mat-427
Subtotal		10.00	cable				6,286,973			
Per Unit Price		1.00	cable				628,697	0	0	

02- 164 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Grouting for Anchor Reference H28BE_ 722

Specification : 19S15.2 Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour for Bridges	12.2 person *2.5	30.50	person	29,400.30			896,709.15			Lab-8
Miscellaneous cost	20%	0.20		896,709.15	0.00	0	179,341.83	(0.00)	0.00	
				896,709.15			0.00			
Filling material	Polyurethane	1	set			22,700			22,700	
Subtotal		10.00	nos				1,076,051		22,700	
Per Unit Price		1.00	nos				107,605	0	2,270	

02-	165	Productivity correction coefficient: Asia	Labour coefficient	Machine coefficient

Item : Depreciation cost for fixing equipment Reference H28BE_ 723

Specification : for external cable Quantity・Unit : 1 LS

Item		Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
					Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Jack & Pump	(2*N1)	One side prestressing_4950kN	90.00	set-day			11,000			990,000	CEDC_ 18-09
Under roller	(1*N2)		31.29	set-day			27,400			857,229	CEDC_ 18-15
Turn roller	(1*N2)		31.29	set-day			2,180			68,203	CEDC_ 18-13
Winch for PC	(1*N2)	29kN(3.0t)28kw inverter included	31.29	set-day			27,700			866,614	CEDC_ 18-05
	N1	= (C /2) * S + D +4	45.00								
	N2	= (C /3.5) * S + D +4	31.29								
	C	Continuou cable no.	32.00	nos							
	S	No. of continuous girders	2.00	nos							
	D	No. of move for equipment	9.00	time							
Subtotal			1.00	LS						2,782,046	
Per Unit Price			1.00	LS				0	0	2,782,046	

02- 166 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Deviator pipe setting Reference H28BE_ 726

Specification : Deviator pipe for 19S15.2_1.624m Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	Length of deviator pipe	1.62	m							
Skilled Labour for Bridges	= length of deviator * 0.3 person / m * 2.5	1.22	person	29,400.30			35,809.57			Lab-8
Miscellaneous cost	6%	0.06		35,809.57	0.00	0	2,148.57	(0.00)	0.00	
*Deviator cost is counted on "02-106 Embedded materials cost of Segment"										
Subtotal		1.00	set				37,958			
Per Unit Price		1.00	set				37,958	0	0	

02- 170 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands Reference H28MLIT 847

Specification : Installation_Main_12S15.2 Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	2.3 person * 2.5	5.75	person	44,100			253,575			Lab-2
Skilled Labour for Bridges	10.8 person * 2.5	27.00	person	29,400			793,808			Lab-8
Scaffolder	0.2 person * 2.5	0.50	person	18,270			9,135			Lab-6
Unskilled Labour	7.6 person * 2.5	19.00	person	12,150			230,850			Lab-21
Miscellaneous cost	11%	0.11		1,033,793	0	0	113,717	0	0	
PC strands	12S15.2	1,374.00	kg	0	0	298	0	0	409,315	Mat-428
Subtotal		100.00	m				1,401,085		409,315	
Per Unit Price		1.00	m				14,011	0	4,093	

02- 171 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Internal prestressing strands_12S15.2_one side prestressing Reference H28MLIT 847

Specification : Prestressing_Main_12S15.2 Quantity・Unit : 10 cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.3 person * 2.5	3.25	person	44,100.00			143,325.00			Lab-2
Skilled Labour for Bridges	8.6 person * 2.5	21.50	person	29,400.30			632,106.45			Lab-8
Form work	3.4 person * 2.5	8.50	person	18,270.00			155,295.00			Lab-18
Unskilled Labour	4.7 person * 2.5	11.75	person	12,150.00			142,762.50			Lab-21
Miscellaneous cost	16%	0.16		930,163.95	0.00	0	148,826.23	(0.00)	0.00	
Anchor	Anchor (ADnC15 Freyssine)	20.00	set	133,650.00	0.00	0	2,673,000.00	(0.00)	0.00	Mat-427
Subtotal		10.00	cable				3,895,315			
Per Unit Price		1.00	cable				389,532	0	0	

02- 175 Productivity correction coefficient: Labour coefficient Technical Machine coefficient none

Asia JICA study team

Item : Internal prestressing strands(for deck) Reference H28MLIT 847

Specification : Installation_Crossbeam_3 S 12.7 Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.7 person * 2.5	1.75	person	44,100			77,175			Lab-2
Skilled Labour for Bridges	3.4 person * 2.5	8.50	person	29,400			249,903			Lab-8
Scaffolder	0.1 person * 2.5	0.25	person	18,270			4,568			Lab-6
Unskilled Labour	2.4 person * 2.5	6.00	person	12,150			72,900			Lab-21
PC strands	3S12.7	232.2	kg	0	0	285	0	0	66,247	Mat-429
Miscellaneous cost	16%	0.16		404,545	0	66,247	64,727	0	10,599	
Subtotal		100.00	m				469,272		76,846	
Per Unit Price		1.00	m				4,693	0	768	

02- 176 Productivity correction coefficient: Labour coefficient Technical Machine coefficient none

Asia JICA study team

Item : Internal prestressing strands(for deck) Reference H28MLIT 847

Specification : Presstressing_Crossbeam_3 S 12.7 Quantity・Unit : 10 Cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.3 person * 2.5	0.75	person	44,100			33,075			Lab-2
Skilled Labour for Bridges	1.7 person * 2.5	4.25	person	29,400			124,951			Lab-8
Form work	0.7 person * 2.5	1.75	person	18,270			31,973			Lab-18
Unskilled Labour	0.9 person * 2.5	2.25	person	12,150			27,338			Lab-21
Miscellaneous cost	17%	0.17		184,261	0	0	31,324	0	0	
Anchor	Anchor (ADnC13 Freyssine)	20.00	set	48,600	0	0	972,000	0	0	Mat-431
Subtotal		10.00	Cable				1,220,661			
Per Unit Price		1.00	Cable				122,066	0	0	

02- 190 Productivity correction coefficient: Labour coefficient Technical Machine coefficient none

Asia JICA study team

Item : Internal prestressing strands(for crossbeam) Reference H28MLIT 847

Specification : Installation_Crossbeam_4 S 15.2 (Horizontal) Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.7 person * 2.5	1.75	person	44,100			77,175			Lab-2
Skilled Labour for Bridges	3.4 person * 2.5	8.50	person	29,400			249,903			Lab-8
Scaffolder	0.1 person * 2.5	0.25	person	18,270			4,568			Lab-6
Unskilled Labour	2.4 person * 2.5	6.00	person	12,150			72,900			Lab-21
PC strands	4S15.2(SWPR7BL)	440.40	kg	0	0	298	0	0	131,195	Mat-430
Miscellaneous cost	16%	0.16		404,545	0	131,195	64,727	0	20,991	
Subtotal		100.00	m				469,272		152,186	
Per Unit Price		1.00	m				4,693	0	1,522	

02- 191 Productivity correction coefficient: Labour coefficient Technical Machine coefficient none

Asia JICA study team

Item : Internal prestressing strands(for crossbeam) Reference H28MLIT 847

Specification : Prestressing_Crossbeam_4 S 15.2 (Horizontal) Quantity・Unit : 10 Cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.3 person * 2.5	0.75	person	44,100.00			33,075.00			Lab-2
Skilled Labour for Bridges	1.7 person * 2.5	4.25	person	29,400.30			124,951.28			Lab-8
Form work	0.7 person * 2.5	1.75	person	18,270.00			31,972.50			Lab-18
Unskilled Labour	0.9 person * 2.5	2.25	person	12,150.00			27,337.50			Lab-21
Miscellaneous cost	17%	0.17		184,261.28	0.00	0	31,324.42	(0.00)	0.00	
Anchor	Anchor (ADnC15 Freyssine)	20.00	set	133,650.00	0.00	0	2,673,000	0	0	Mat-427
Subtotal		10.00	Cable				2,921,661			
Per Unit Price		1.00	Cable				292,166	0	0	

02- 195 Productivity correction coefficient: Labour coefficient Technical Machine coefficient none

Asia JICA study team

Item : Internal prestressing strands(for crossbeam) Reference H28MLIT 847

Specification : Installation_Crossbeam_D32 (Vertical prestressing) Quantity・Unit : 100 m

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	3.7 person * 2.5	9.25	person	29,400.30			271,952.78			Lab-8
Scaffolder	0.1 person * 2.5	0.25	person	18,270.00			4,567.50			Lab-6
Unskilled Labour	2.6 person * 2.5	6.50	person	12,150.00			78,975.00			Lab-21
PC bar	SBPR 930/1180 φ32mm(3m)	656	kg	3,007.13	0.00	0	1,972,674.00	(0.00)	0.00	Mat-432
Miscellaneous cost	17%	0.17		2,416,369.28	0.00	0	410,782.78	(0.00)	0.00	
Subtotal		100.00	m				2,827,152			
Per Unit Price		1.00	m				28,272	0	0	

一位代価表 - 196

Productivity correction coefficient: Asia

Labour coefficient Technical

Machine coefficient none

Item : Prestressing steel bar

Reference H28MLIT 847

Specification : Prestressing_Crossbeam_D32 (Vertical prestressing)

Quantity・Unit : 10 cable

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Prestressing_Vertical bar										
Foreman for Bridges	0.3 person * 2.5	0.75	person	44,100			33,075			Lab-2
Skilled Labour for Bridges	2.0 person * 2.5	5.00	person	29,400			147,002			Lab-8
Form work	0.8 person * 2.5	2.00	person	18,270			36,540			Lab-18
Unskilled Labour	1.1 person * 2.5	2.75	person	12,150			33,413			Lab-21
Anchor_fix_side	Anchor (165*165mm_t=32mm)	20	set	0	0	3,690	0	0	73,800	Mat-433
Miscellaneous cost	12%	0.12		250,029	0	0	30,003	0	0	
Subtotal		10.00	cable				280,032		73,800	
Per Unit Price		1.00	cable				28,003	0	7,380	

02- 200 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar installation Reference H28MLIT 828

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.6 person * 2.5	4.00	person	44,100			176,400			Lab-2
Skilled Labour for Bridges	13.6 person * 2.5	34.00	person	29,400			999,610			Lab-8
Unskilled Labour	7.5 person * 2.5	18.75	person	12,150			227,813			Lab-21
Miscellaneous cost	7%	0.07		1,403,823	0	0	98,268	0	0	
*include "Metal sheath, grout material, plastic tape etc"										
PC steel bar	φ32	1.06	t	0	0	306,900	0	0	325,314	Mat-425
Subtotal		1.00	t				1,502,090		325,314	
Per Unit Price		1.00	t				1,502,090	0	325,314	

02- 201 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar connection Reference H28MLIT 828

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.4 person * 2.5	1.00	person	44,100			44,100			Lab-2
Skilled Labour for Bridges	1.4 person * 2.5	3.50	person	29,400			102,901			Lab-8
Unskilled Labour	0.8 person * 2.5	2.00	person	12,150			24,300			Lab-21
Miscellaneous cost	6%	0.06		171,301	0	0	10,278	0	0	
*include "Grout hose, plastic tape etc"										
Joint	for PC bar φ32mm	10	nos	0	0	1,935	0	0	19,350	Mat-434
Subtotal		10.00	nos				181,579		19,350	
Per Unit Price		1.00	nos				18,158	0	1,935	

02- 202 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar anchor setting Reference H28MLIT 828

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour for Bridges	1.1 person * 2.5	2.75	person	29,400.30			80,850.83			Lab-8
Miscellaneous cost	19%	0.19		80,850.83			15,361.66			
*include "Grout hose, plastic tape etc"				80,850.83			0.00			
Anchor	Fixing side	10	nos	0.00	0.00	3,690	0.00	(0.00)	36,900.00	Mat-433
Subtotal		10.00	nos				96,212		36,900	
Per Unit Price		1.00	nos				9,621	0	3,690	

02- 203 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar prestressing Reference H28MLIT 828

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	4.6 person * 2.5	11.50	person	29,400.30			338,103.45			Lab-8
Unskilled Labour	2.0 person * 2.5	5.00	person	12,150.00			60,750.00			Lab-21
Miscellaneous cost	4%	0.04		487,053.45	0.00	0	19,482.14	(0.00)	0.00	
*include "Grout hose, plastic tape etc"										
Anchor	Prestressing side	10	nos	0.00	0.00	3,105	0.00	(0.00)	31,050.00	Mat-435
Subtotal		10.00	nos				506,536		31,050	
Per Unit Price		1.00	nos				50,654	0	3,105	

02- 204 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar_Stress release Reference H28MLIT 826

Specification : φ32 (2.5m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.5 person * 2.5	1.25	person	44,100.00			55,125.00			Lab-2
Skilled Labour for Bridges	3.3 person * 2.5	8.25	person	29,400.30			242,552.48			Lab-8
Unskilled Labour	1.4 person * 2.5	3.50	person	12,150.00			42,525.00			Lab-21
Subtotal		10.00	nos				340,202			
Per Unit Price		1.00	nos				34,020	0	0	

02- 210 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar installation Reference H28MLIT 828

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 1 t

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	1.6 person * 2.5	4.00	person	44,100.00			176,400.00			Lab-2
Skilled Labour for Bridges	13.6 person * 2.5	34.00	person	29,400.30			999,610.20			Lab-8
Unskilled Labour	7.5 person * 2.5	18.75	person	12,150.00			227,812.50			Lab-21
Miscellaneous cost	7%	0.07		1,403,822.70	0.00	0	98,267.59	(0.00)	0.00	
*include "Metal sheath, grout material, plastic tape etc"										
PC steel bar	φ32	1.06	t	0	0	306,900	0	0	325,314	Mat-425
Subtotal		1.00	t				1,502,090		325,314	
Per Unit Price		1.00	t				1,502,090	0	325,314	

02- 211 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar connection Reference H28MLIT 828

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.4 person * 2.5	1.00	person	44,100.00			44,100.00			Lab-2
Skilled Labour for Bridges	1.4 person * 2.5	3.50	person	29,400.30			102,901.05			Lab-8
Unskilled Labour	0.8 person * 2.5	2.00	person	12,150.00			24,300.00			Lab-21
Miscellaneous cost	6%	0.06		171,301.05	0.00	0	10,278.06	(0.00)	0.00	
*include "Grout hose, plastic tape etc"										
Joint	for PC bar φ32mm	10	nos	0	0	1,935	0	0	19,350	Mat-434
Subtotal		10.00	nos				181,579		19,350	
Per Unit Price		1.00	nos				18,158	0	1,935	

02- 212 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar anchor setting Reference H28MLIT 828

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Skilled Labour for Bridges	1.1 person * 2.5	2.75	person	29,400.30			80,850.83			Lab-8
Miscellaneous cost	19%	0.19		80,850.83			15,361.66			
*include "Grout hose, plastic tape etc"				80,850.83			0.00			
Anchor	Fixing side	10	nos	0.00	0.00	3,690	0.00	(0.00)	36,900.00	Mat-433
Subtotal		10.00	nos				96,212		36,900	
Per Unit Price		1.00	nos				9,621	0	3,690	

02- 213 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar prestressing Reference H28MLIT 828

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.8 person * 2.5	2.00	person	44,100.00			88,200.00			Lab-2
Skilled Labour for Bridges	4.6 person * 2.5	11.50	person	29,400.30			338,103.45			Lab-8
Unskilled Labour	2.0 person * 2.5	5.00	person	12,150.00			60,750.00			Lab-21
Miscellaneous cost	4%	0.04		487,053.45	0.00	0	19,482.14	(0.00)	0.00	
*include "Grout hose, plastic tape etc"										
Anchor	Prestressing side	10	nos	0.00	0.00	3,105	0.00	(0.00)	31,050.00	Mat-435
Subtotal		10.00	nos				506,536		31,050	
Per Unit Price		1.00	nos				50,654	0	3,105	

02- 214 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : PC bar_Stress release Reference H28MLIT 826

Specification : φ32 (6.0m) and anchorage Quantity・Unit : 10 nos

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman for Bridges	0.5 person * 2.5	1.25	person	44,100.00			55,125.00			Lab-2
Skilled Labour for Bridges	3.3 person * 2.5	8.25	person	29,400.30			242,552.48			Lab-8
Unskilled Labour	1.4 person * 2.5	3.50	person	12,150.00			42,525.00			Lab-21
Subtotal		10.00	nos				340,202			
Per Unit Price		1.00	nos				34,020	0	0	

02- 220 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : Class A Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870			1,025			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270			1,713			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150			2,848			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		5,500	kg	85			465,300			Mat-53
Water		1,600	kg	90			144,000			Mat-137
Coarse Agg.	*including washing cost 10%	10,140	kg	15			152,774			Mat-62
Fine Agg.	*including washing cost 10%	8,140	kg	15			122,641			Mat-61
Chemical admixture	for Class A,B,CI,D,E	10	l	1,157			11,565			Mat-60
Concrete plant equipment	60 m3 / h	0.03	day	895,793			27,994			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149			2,697			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690	0	0	3,069	0	0	
Subtotal		10.00	m3				940,558			
Per Unit Price		1.00	m3				94,056	0	0	

02- 221 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : Class B Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		5,000	kg	84.60			423,000.00			Mat-53
Water		1,600	kg	90.00			144,000.00			Mat-137
Coarse Agg.	*including washing cost 10%	10,140	kg	15.07			152,773.90			Mat-62
Fine Agg.	*including washing cost 10%	8,140	kg	15.07			122,640.98			Mat-61
Chemical admixture	for Class A,B,CI,D,E	10	l	1,156.50			11,565.00			Mat-60
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				898,258			
Per Unit Price		1.00	m3				89,826	0	0	

02- 222 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : Class C I Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		4,300	kg	84.60			363,780.00			Mat-53
Water		1,700	kg	90.00			153,000.00			Mat-137
Coarse Agg.	*including washing cost 10%	10,300	kg	15.07			155,184.53			Mat-62
Fine Agg.	*including washing cost 10%	8,440	kg	15.07			127,160.92			Mat-61
Chemical admixture	for Class A,B,CI,D,E	10	l	1,156.50			11,565.00			Mat-60
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				854,969			
Per Unit Price		1.00	m3				85,497	0	0	

02- 223 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : Class C II(for cast-in-place RC pile) Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		4,300	kg	84.60			363,780.00			Mat-53
Water		1,700	kg	90.00			153,000.00			Mat-137
Coarse Agg.	*including washing cost 10%	10,300	kg	15.07			155,184.53			Mat-62
Fine Agg.	*including washing cost 10%	8,440	kg	15.07			127,160.92			Mat-61
Chemical admixture	for CII	46	l	1,786.50	0.00	0.00	82,179.00	(0.00)	0.00	Mat-59
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				925,583			
Per Unit Price		1.00	m3				92,558	0	0	

02- 224 Productivity correction coefficient: Asia

Labour coefficient Simple

Machine coefficient none

Item : Concrete

Reference JICA study team

Specification : Class D

Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		3,450	kg	84.60			291,870.00			Mat-53
Water		1,850	kg	90.00			166,500.00			Mat-137
Coarse Agg.	*including washing cost 20%	11,350	kg	15.07			171,004.31			Mat-62
Fine Agg.	*including washing cost 20%	7,700	kg	15.07			116,011.74			Mat-61
Chemical admixture	for Class A,B,CI,D,E	10	l	1,156.50			11,565.00			Mat-60
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				801,230			
Per Unit Price		1.00	m3				80,123	0	0	

02- 225 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : Class E Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		2,900	kg	84.60			245,340.00			Mat-53
Water		1,600	kg	90.00			144,000.00			Mat-137
Coarse Agg.	*including washing cost 10%	12,420	kg	15.07			187,125.42			Mat-62
Fine Agg.	*including washing cost 10%	7,400	kg	15.07			111,491.80			Mat-61
Chemical admixture	for Class A,B,CI,D,E	10	l	1,156.50			11,565.00			Mat-60
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				743,801			
Per Unit Price		1.00	m3				74,380	0	0	

02- 226 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Mortar Reference

Specification : for Joint of Steel Pipe Quantity・Unit : 1 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Cement	Ordinal portland cement	0.60	ton	84,600.00	0.00	0	50,760.00	(0.00)	0.00	Mat-53
Flyash		0.20	ton	0.00	0.00	10,800	0.00	(0.00)	2,160.00	Mat-278
Chemical admixture	for water prevention	7.00	kg	0.00	0.00	252	0.00	(0.00)	1,764.00	Mat-279
Fine aggregate		0.425	m3	36,296.47	0.00	0	15,426.00	(0.00)	0.00	Mat-61
Subtotal		1.00	m3				66,186		3,924	
Per Unit Price		1.00	m3				66,186	0	3,924	

02- 227 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Mortar Reference

Specification : for Joint of Steel Pipe(cofferdam) Quantity・Unit : 1 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Cement	Ordinal portland cement	0.20	ton	84,600.00	0.00	0	16,920.00	(0.00)	0.00	Mat-53
Flyash		0.20	ton	0.00	0.00	10,800	0.00	(0.00)	2,160.00	Mat-278
Bentonite		0.10	ton	0.00	0.00	21,780	0.00	(0.00)	2,178.00	Mat-280
Chemical admixture	for water prevention	4.00	kg	0.00	0.00	252	0.00	(0.00)	1,008.00	Mat-279
Fine aggregate		0.303	m3	36,296.47	0.00	0	10,997.83	(0.00)	0.00	Mat-61
Subtotal		1.00	m3				27,918		5,346	
Per Unit Price		1.00	m3				27,918	0	5,346	

02- 228 Productivity correction coefficient: Asia Labour coefficient Simple Machine coefficient none

Item : Concrete Reference JICA study team

Specification : for bottom slab of SPSP Quantity・Unit : 10 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Daily productivity	Plant production 40 m3 / h * 8 h	320.00	m3							
Concrete plant operation										
Foreman	1.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.05	person	21,870.00			1,025.16			Lab-1
Equipment Operator	2.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.09	person	18,270.00			1,712.81			Lab-12
Unskilled Labour	5.0 person * 1.5 * (10 m3 / 320 m3 / day)	0.23	person	12,150.00			2,847.66			Lab-21
*1 person taking care aggregate Temp. well										
Wheel Loader	1.4 m3	0.03	day	157,872			4,934			OPE-74
Material										
Cement		2,900	kg	84.60			245,340.00			Mat-53
Water		1,600	kg	90.00			144,000.00			Mat-137
Coarse Agg.	*including washing cost 10%	12,420	kg	15.07			187,125.42			Mat-62
Fine Agg.	*including washing cost 10%	7,400	kg	15.07			111,491.80			Mat-61
Chemical admixture	for bottom slab of SPSP(1)	7.62	l	7,699.86	0.00	0	58,672.93	(0.00)	0.00	Mat-58
Chemical admixture	for bottom slab of SPSP(2)	4.07	l	4,351.03	0.00	0	17,708.69	(0.00)	0.00	Mat-48
Concrete plant equipment	60 m3 / h	0.03	day	895,793.3			27,993.54			Mac-d(7)
Silo	50 t * 2 set	0.06	day	43,149.04			2,696.81			Mac-d(8)
Equipment for cooling materials	10 % of equipment cost	0.10		30,690.35	0.00	0	3,069.04	(0.00)	0.00	
Subtotal		10.00	m3				808,617			
Per Unit Price		1.00	m3				80,862	0	0	

02- 229 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Non-shrink Mortar Reference or Civil Works/2015 P. IV-7-⑨-11

Specification : Quantity・Unit : 1 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Non-shrink Mortar		1,875.00	kg	1,352	0	0	2,534,625	0	0	Mat-439
Water		338.00	l	90	0	0	30,420.00	(0.00)	0.00	Mat-137
Subtotal		1.00	m3				2,565,045			
Per Unit Price		1.00	m3				2,565,045	0	0	

02- 230 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Main Erection Girder Reference

Specification : Cable stayed bridge Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Erection Girder	Box Girder 1.5x2.4x7.5m	116.80	t			445,000			51,976,000.00	
SplicePlate		7.20	t			445,000			3,204,000.00	
Support Reinforcement		8.00	t			445,000			3,560,000.00	
Guide Beam	H-500x300x16x9x27.0m	13.08	t			300,000			3,924,000.00	
Support Base		2.00	t			455,000			910,000.00	
Subtotal		1.00	set						63,574,000	
Per Unit Price		1.00	set				0	0	63,574,000	

02- 231 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Main Hoist Reference

Specification : Cable stayed bridge Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Double Twine Jack	700kN, 300mm, 6RM-15040	2.06	t			4,000,000			8,240,000	
Oil Hydraulic Pump Set	4LH-3.7P	1.32	t			8,437,500			11,137,500	
PC Strand	φ28.6mm	0.42	t			403,000			170,429	
Winch Frame and side walk		3.00	t			445,000			1,335,000	
Hook & Swievel		1.50	t			3,000,000			4,500,000	
Subtotal		1.00	set						25,382,929	
Per Unit Price		1.00	set				0	0	25,382,929	

02- 232 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding Reference

Specification : Cable stayed bridge Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main Frame	Suspension type	7.20	t			445,000			3,204,000.00	
Hoist	3tx12m	2.00	nos			921,000			1,842,000.00	
Subtotal		1.00	set						5,046,000	
Per Unit Price		1.00	set				0	0	5,046,000	

02- 233 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Hydraulic Jack & Pump Set Reference

Specification : Cable stayed bridge Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Girder support Jack	50t x200mm stroke	8.00	Nos			395,000			3,160,000.00	
Hydraulic Pump Set for above	3.7KW	2.00	Nos			2,500,000			5,000,000.00	
H-Beam Clamp Jack	60tx640mm stroke	4.00	Nos			1,530,000			6,120,000.00	
Hydraulic Pump Set for above	MTE-1.5, 1.5kW, 73MPa	4.00	Nos			1,094,800			4,379,200.00	
Horizontal Jack	500kn JTP-20100, 1000mm	4.00	Nos			900,000			3,600,000.00	
Oil Jack Pump for above	Pump, SPU-7.5 7.5kW, 26MPa	4.00	Nos			3,206,300			12,825,200.00	
Sliding Jack	30tx500mm stroke	8.00	Nos			980,000			7,840,000.00	
Hydraulic Pump Set for above										
Miscellanous tool	5% for Jacks	0.05				42,924,400			2,146,220.00	
Hydraulic Hoses	5% for Jacks	0.05				42,924,400			2,146,220.00	
Subtotal		1.00	set						47,216,840	
Per Unit Price		1.00	set				0	0	47,216,840	

02- 234

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Guide frame_Scaffolding

Reference

Specification : PKG2_P21_22(1nos)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide frame	H-350×350×12×19	17.320	t	0.00	0.00	66,600	0.00	(0.00)	1,153,512.00	Mat-177
Support for frame	[-200×90×8×13.5	5.03	t	0.00	0.00	64,800	0.00	(0.00)	325,944.00	Mat-211
Subtotal		1.00	LS						1,479,456	
Per Unit Price		1.00	LS				0	0	1,479,456	

02- 235

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Guide frame_Scaffolding

Reference

Specification : Cable stayed bridge

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide frame	H-350×350×12×19	208.40	t	0.00	0.00	66,600	0.00	(0.00)	13,879,440.00	Mat-177
Support for frame	[-200×90×8×13.5	4.40	t	0.00	0.00	64,800	0.00	(0.00)	285,120.00	Mat-211
Subtotal		1.00	LS						14,164,560	
Per Unit Price		1.00	LS				0	0	14,164,560	

02- 236 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding Reference

Specification : inside SPSP Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Scaffolding	H-300×300×10×15	85.40	t	0.00	0.00	64,800	0	0	5,533,920	Mat-169
	H-350×350×12×19	147.20	t	0.00	0.00	66,600	0	0	9,803,520	Mat-177
	H-400×400×13×21	128.00	t	0.00	0.00	69,300	0	0	8,870,400	Mat-170
Sub-material		94.00	t		0.00	66,900		0	6,288,600	
Subtotal		1.00	LS						30,496,440	
Per Unit Price		1.00	LS				0	0	30,496,440	

02- 237 Productivity correction coefficient: Asia Labour coefficient Technical Machine coefficient none

Item : Supporting Reference H28MLIT 277

Specification : Wedge type Quantity・Unit : 100 m3

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Foreman	2.1 person * 2.5	5.25	person	21,870.00			114,817.50			Lab-1
Scaffolder	2.7 person * 2.5	6.75	person	18,270.00			123,322.50			Lab-6
Form Worker	4.2 person * 2.5	10.50	person	18,270.00			191,835.00			Lab-18
Unskilled Labour	6.0 person * 2.5	15.00	person	12,150.00			182,250.00			Lab-21
Crawler crane	100t hang	1.20	day	604,856.00			725,827.20			OPE-42
Miscellaneous cost	33%	0.33		1,338,052.20	0.00	0	441,557.23	(0.00)	0.00	
Subtotal		100.00	m3				1,779,609			
Per Unit Price		1.00	m3				17,796	0	0	

02- 238

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Bent equipment for tower

Reference

Specification : 8.85 t

Quantity・Unit : 1 set

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam (H-300x300x10x15)	L=1.97m, wt=93.0kg/m	2.20	t	0.00	0.00	64,800	0.00	(0.00)	142,464.10	Mat-176
	L=1.67m, wt=93.0kg/m	1.86	t	0.00	0.00	64,800	0.00	(0.00)	120,769.06	Mat-176
	L=2.14m, wt=93.0kg/m	2.39	t	0.00	0.00	64,800	0.00	(0.00)	154,757.95	Mat-176
H-Beam (H-200x200x8x12)	L=6.94m, wt=49.9kg/m	1.39	t	0.00	0.00	64,800	0.00	(0.00)	89,762.52	Mat-174
	L=3.08m, wt=49.9kg/m	0.61	t	0.00	0.00	64,800	0.00	(0.00)	39,836.97	Mat-174
	L=1.00m, wt=49.9kg/m	0.40	t	0.00	0.00	64,800	0.00	(0.00)	25,868.16	Mat-174
Subtotal		1.00	set						573,459	
Per Unit Price		1.00	set				0	0	573,459	

02- 240

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Guide frame_Scaffolding

Reference

Specification : PKG2_(P14_15_16_17_18_19_20)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide frame	H-350×350×12×19	93.768	t	0.00	0.00	66,600	0.00	(0.00)	6,244,948.80	Mat-177
Support for frame	[-200×90×8×13.5	8.52	t	0.00	0.00	64,800	0.00	(0.00)	551,772.00	Mat-211
Subtotal		1.00	LS						6,796,721	
Per Unit Price		1.00	LS				0	0	6,796,721	

02- 245 Productivity correction coefficient: Asia Labour coefficient none Machine coefficient General

Item : Steel Pipe driving_(Driving Length16-32m)_φ1200 Reference H28MLIT 197

Specification : for bent piles Quantity・Unit : 20 nos

Item	Specification	Quantity	Unit	Unit Price Local (MMK)	Unit Price Foreign (USD)	Unit Price Main (JPY)	Subtotal Local (MMK)	Subtotal Foreign (USD)	Subtotal Main (JPY)	Remarks
2 party										
a= 1.00 b= 1.07	Ta = 4.8	5.136	day/20nos	(Daily productivity)						
Foreman	1 person* total days * party	10.272	person	21,870			224,649			Lab-1
Scaffolder	2 person* total days * party	20.544	person	18,270			375,339			Lab-6
Unskilled Labour	1 person* total days * party	10.272	person	12,150			124,805			Lab-21
Welder	2 person* total days * party	20.544	person	19,440			399,375			Lab-17
Crawler crane	200t hang	5.136	day	2,814,363			14,454,568			OPE-46
Vibratory Hammer224kW		5.136	day	204,309	864		1,049,331	4,439		OPE-59
Barge	2000t	5.136	day	3,192,909	0	0	16,398,779	0	0	Mac-d(19)
Crawler crane	200t hang	5.136	day	2,814,363			14,454,568			OPE-46
Vibratory Hammer224kW		5.136	day	204,309	864		1,049,331	4,439		OPE-59
Barge	2000t	5.136	day	3,192,909	0	0	16,398,779	0	0	Mac-d(19)
Tag boat 3000PS_330GT	1/(8 nos / 20 nos * days)	0.140	day	4,210,954			590,332			OPE-62
*1 bent 8 nos of piles										
Transportation 1200t(10 nos/time)	2 nos	2.568	day	2,498,798	0	0	6,416,913	0	0	Mac-d(10)
Tag boat 1000PS_90GT	0.346 hr/day / (8 hr/day) * 2 time	0.173	day	1,387,972			240,188			OPE-65
Transportation 300t(10 nos/2 time)	2 nos	2.568	day	727,825	0	0	1,869,053	0	0	Mac-d(22)
Tag boat 350PS_30GT	0.346 hr/day / (8 hr/day) * 4 time	0.346	day	532,437			184,276			OPE-68
Miscellaneous cost	31%	0.31		1,124,168	0	0	348,492	0	0	
Subtotal		20.00	nos				74,578,778	8,878		
Per Unit Price		1.00	nos				3,728,939	444	0	

02- 246 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Bent equipment except for piles_PKG1 Reference

Specification: Material Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-1000x400x40x18		401.592	t		0.00	78,300		0	31,444,654	Mat-167
H-400x400x13x21		79.200	t	0.00	0.00	69,300	0	0	5,488,560	Mat-169
H-150x150x7x10		37.320	t	0.00	0.00	64,800	0	0	2,418,336	Mat-173
H-150x150x7x10		10.800	t	0.00	0.00	64,800	0	0	699,840	Mat-173
Angle Bar Materials										
L-6x75x75		20.760	t	0.00	0.00	68,400	0	0	1,419,984	Mat-191
Hydraulic Jack 200t		96	nos	0.00	0.00	999,000.00	0	0	95,904,000	Mat-296
Manual Pump HP-5		12	nos	0.00	0.00	372,600.00	0	0	4,471,200	Mat-297
Depreciation	50%	(0.50)		0	0.00	141,846,574	0	0	(70,923,287)	
Subtotal		1.00	LS						70,923,287	
Per Unit Price		1.00	LS				0	0	70,923,287	

02- 247 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Bent equipment except for piles_PKG2 Reference

Specification: Material Quantity・Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-1000x400x40x18		84.600	t		0.00	78,300		0	6,624,180	Mat-167
H-400x400x13x21		59.400	t	0.00	0.00	69,300	0	0	4,116,420	Mat-169
H-150x150x7x10		19.980	t	0.00	0.00	64,800	0	0	1,294,704	Mat-173
Angle Bar Materials										
L-6x75x75		15.570	t	0.00	0.00	68,400	0	0	1,064,988	Mat-191
Hydraulic Jack 200t		72	nos	0.00	0.00	999,000	0	0	71,928,000	Mat-296
Manual Pump HP-5		9	nos	0.00	0.00	372,600	0	0	3,353,400	Mat-297
Depreciation	70%	(0.70)		0	0.00	88,381,692.00	0	0	(61,867,184)	
Subtotal		1.00	LS						26,514,508	
Per Unit Price		1.00	LS				0	0	26,514,508	

02- 250 Productivity correction coefficient: Labour coefficient Machine coefficient

Item: Temprary Jetty Thaketa Reference

Specification: Material Quantity･Unit: 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam Materials										
H-Beam (H-400x400x13x12)		3,151.31	t	0	0	69,300	0	0	218,385,783	Mat-169
H-Beam (H-300x300x10x15)		0.48	t	0	0	64,800	0	0	31,104	Mat-176
H-Beam (H-488x300x11x18)		110.33	t	0	0	66,600	0	0	7,347,978	Mat-171
H-Beam (H-800x300x14x26)		201.85	t	0	0	75,600	0	0	15,259,860	Mat-188
C-Channel Materials										
C-Channel (C-150x75x6.5x10)		141.16	t	0	0	63,900	0	0	9,020,124	Mat-206
C-Channel (C-300x90x9x13)		174%	t	0	0	66,600	0	0	116,004	Mat-207
C-Channel Materials (C-380x100x10.5x16)		23.81	t	0	0	68,400	0	0	1,628,604	Mat-208
Angle Bar Materials										
Angle Bar Materials (L-100x100x10)		244.93	t	0	0	68,400	0	0	16,753,212	Mat-191
FB Materials										
FB Material (FB-140x300x12)		0.07	t	0	0	103,500	0	0	7,245	
Bolts & Nuts Materials										
M22 (F 10 T) 85		28052	nos	0	0	128	0	0	3,585,046	Mat-221
Metal Deck Materials										
Metal Deck Material (2000x1000x200)		449.21	t	0	0	104,651	0	0	47,010,349	Mat-213
Metal Deck Material (4000x2000x200)			t	0	0	104,651	0	0	0	Mat-214
Scrap	50%	(0.50)		0	0	319,145,309	0	0	(159,572,655)	
Subtotal		1.00	LS						159,572,654	
Per Unit Price		1.00	LS				0	0	159,572,654	

02- 255

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Main & Intermediate scaffolding

Reference

Specification : Cable Stayed Bridge_MainSpan(1side)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main	5 m * 2 set	1.00	month			549,600			549,600.00	
Intermediate	5 m * 2 set	1.00	month			549,600			549,600.00	
Subtotal		1.00	month						1,099,200	
Per Unit Price		1.00	month				0	0	1,099,200	

02- 256

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional work space scaffolding

Reference

Specification : Cable Stayed Bridge_MainSpan(1side)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	5 m * 2 set	1.00	month			20,192			20,192.00	
Subtotal		1.00	month						20,192	
Per Unit Price		1.00	month				0	0	20,192	

02- 257 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Safety passage Reference

Specification : Cable Stayed Bridge_MainSpan(1side) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	5 m * 2 set	1.00	month			549,600			549,600.00	
Subtotal		1.00	month						549,600	
Per Unit Price		1.00	month				0	0	549,600	

02- 258

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional support for steeldeck

Reference

Specification : Cable Stayed Bridge_MainSpan(1side)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	5 m * 2 set	1.00	month			549,600			549,600.00	
Subtotal		1.00	month						549,600	
Per Unit Price		1.00	month				0	0	549,600	

02- 259

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Protective shelf for hanging scaffold

Reference

Specification : Cable Stayed Bridge_MainSpan(1side)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	5 m * 2 set	1.00	month			549,600			549,600.00	
Subtotal		1.00	month						549,600	
Per Unit Price		1.00	month				0	0	549,600	

02- 260 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fall prevention / protection Reference

Specification : Cable Stayed Bridge_MainSpan(1side) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Wire bridge protection	5 m * 2 set	1.00	month			476,320			476,320	
Subtotal		1.00	month						476,320	
Per Unit Price		1.00	month				0	0	476,320	

02- 261 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Main & Intermediate scaffolding Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main	10m*110 m * 1 set	1.00	month			2,640,000			2,640,000.00	
Intermediate	10m*110 m * 1 set	1.00	month			2,640,000			2,640,000.00	
Subtotal		1.00	month						5,280,000	
Per Unit Price		1.00	month				0	0	5,280,000	

02- 262 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Additional work space scaffolding Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*110 m * 1 set	1.00	month			95,969			95,969.00	
Subtotal		1.00	month						95,969	
Per Unit Price		1.00	month				0	0	95,969	

02- 263 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Safety passage Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*110 m * 1 set	1.00	month			2,640,000			2,640,000.00	
Subtotal		1.00	month						2,640,000	
Per Unit Price		1.00	month				0	0	2,640,000	

02- 264

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional support for steeldeck

Reference

Specification : Steel box girder_PKG2

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*110 m * 1 set	1.00	month			2,640,000			2,640,000.00	
Subtotal		1.00	month						2,640,000	
Per Unit Price		1.00	month				0	0	2,640,000	

02- 265 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Protective shelf for hanging scaffold Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*110 m * 1 set	1.00	month			2,640,000			2,640,000.00	
Subtotal		1.00	month						2,640,000	
Per Unit Price		1.00	month				0	0	2,640,000	

02- 266 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fall prevention / protection Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Wire bridge protection	10m*110 m * 1 set	1.00	month			2,288,000			2,288,000	
Subtotal		1.00	month						2,288,000	
Per Unit Price		1.00	month				0	0	2,288,000	

02- 267 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding for ascending piers Reference

Specification : Steel box girder_PKG2 Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	4nos	1.00	month			400,880			400,880	
Subtotal		1.00	month						400,880	
Per Unit Price		1.00	month				0	0	400,880	

02- 268 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Embedded materials cost of Segment Reference

Specification : PKG2 Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Embedded materials	Sheath for 12S15.2	5,546	m	0.00	0.00	631	0	0	3,498,971	Mat-418
Embedded materials	Sheath for 4S15.2	120	m	0.00	0.00	311	0	0	37,260	Mat-419
Embedded materials	Sheath for 3S12.7	11,670	m	0.00	0.00	311	0	0	3,623,535	Mat-420
Embedded materials	Sheath for PC Bar φ32	1,528	m	0.00	0.00	213	0	0	325,922	Mat-421
Embedded materials	Deviator pipe for 19S15.2at Deviator (L=0.812m)(SPG	288	nos	0.00	0.00	1,980	0	0	570,240	Mat-422
Embedded materials	Deviator pipe for 19S15.2at Support Crossbeam(L=1.6	40	nos	0.00	0.00	3,960	0	0	158,400	Mat-423
Embedded materials	Sleeve pipe for 19S15.2(SPG)	112	nos	0.00	0.00	4,590	0	0	514,080	Mat-424
Subtotal		1.00	LS						8,728,409	
Per Unit Price		1.00	LS				0	0	8,728,409	

02- 269

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Guide frame_Scaffolding

Reference

Specification : 3 spans Steel box girder const. from Barge(Design change)

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide frame	H-350×350×12×19	13.90	t	0.00	0.00	66,600	0.00	(0.00)	925,740.00	Mat-177
Guide frame	H-300×300×10×15	9.20	t	0.00	0.00	64,800	0	0	596,160	Mat-169
Support for frame	[-200×90×8×13.5	2.30	t	0.00	0.00	64,800	0.00	(0.00)	149,040.00	Mat-211
Subtotal		1.00	LS						1,670,940	
Per Unit Price		1.00	LS				0	0	1,670,940	

02- 270 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Guide frame_Scaffolding Reference

Specification : 3 spans Steel box girder const. from Jetty(Design change) Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Guide frame	H-350×350×12×19	208.40	t	0.00	0.00	66,600	0.00	(0.00)	13,879,440.00	Mat-177
Support for frame	[-200×90×8×13.5	4.40	t	0.00	0.00	64,800	0.00	(0.00)	285,120.00	Mat-211
Subtotal		1.00	LS						14,164,560	
Per Unit Price		1.00	LS				0	0	14,164,560	

02- 271

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Fall prevention / protection

Reference

Specification : 3 spans Steel box girder const. on Land(Design change)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Wire bridge protection	10m*100 m * 1 set	1.00	month			2,080,000			2,080,000	
Subtotal		1.00	month						2,080,000	
Per Unit Price		1.00	month				0	0	2,080,000	

02- 272

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Scaffolding for ascending piers

Reference

Specification : 3 spans Steel box girder const. on Land(Design change)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	2nos	1.00	month			200,440			200,440	
Subtotal		1.00	month						200,440	
Per Unit Price		1.00	month				0	0	200,440	

02- 273 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Main & Intermediate scaffolding Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Main	10m*100 m * 1 set	1.00	month			2,496,000			2,496,000.00	
Intermediate	10m*100 m * 1 set	1.00	month			2,496,000			2,496,000.00	
Subtotal		1.00	month						4,992,000	
Per Unit Price		1.00	month				0	0	4,992,000	

02- 274 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Additional work space scaffolding Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*100 m * 1 set	1.00	month			90,749			90,749.00	
Subtotal		1.00	month						90,749	
Per Unit Price		1.00	month				0	0	90,749	

02- 275 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Safety passage Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*100 m * 1 set	1.00	month			2,496,000			2,496,000.00	
Subtotal		1.00	month						2,496,000	
Per Unit Price		1.00	month				0	0	2,496,000	

02- 276

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Additional support for steeldeck

Reference

Specification : 3 spans Steel box girder const. in River(Design change)

Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*100 m * 1 set	1.00	month			2,496,000			2,496,000.00	
Subtotal		1.00	month						2,496,000	
Per Unit Price		1.00	month				0	0	2,496,000	

02- 277 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Protective shelf for hanging scaffold Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	10m*100 m * 1 set	1.00	month			2,496,000			2,496,000.00	
Subtotal		1.00	month						2,496,000	
Per Unit Price		1.00	month				0	0	2,496,000	

02- 278 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Fall prevention / protection Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Wire bridge protection	10m*100 m * 1 set	1.00	month			2,163,200			2,163,200	
Subtotal		1.00	month						2,163,200	
Per Unit Price		1.00	month				0	0	2,163,200	

02- 279 Productivity correction coefficient: Asia Labour coefficient Machine coefficient

Item : Scaffolding for ascending piers Reference

Specification : 3 spans Steel box girder const. in River(Design change) Quantity・Unit : 1 month

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
	2nos	1.00	month			200,440			200,440	
Subtotal		1.00	month						200,440	
Per Unit Price		1.00	month				0	0	200,440	

02- 280

Productivity correction coefficient: Asia

Labour coefficient

Machine coefficient

Item : Material for Bracket support

Reference

Specification : P6,7

Quantity・Unit : 1 LS

Item	Specification	Quantity	Unit	Unit Price			Subtotal			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
H-Beam (H-300x300x10x15)		42.67	MT	1,053,000			44,931,510			
H-Beam (H-200x200x8x12)		19.30	MT	1,053,000			20,322,900			
Depreciation		(0.70)		65,254,410						
Subtotal		1.00	LS				65,254,410			
Per Unit Price		1.00	LS				65,254,410	0	0	

Table3-6

Labour Unit Cost List

No.	Position	Specification	Unit	Applied unit price	
				Local (MMK)	Conv.to JPY
Lab-1	Foreman		day	21,870	1,820
Lab-2	Foreman for Bridges		day	44,100	3,669
Lab-4	Mechanic		day	21,870	1,820
Lab-5	Carpenter		day	18,270	1,520
Lab-6	Scaffolder		day	18,270	1,520
Lab-7	Electrician		day	21,870	1,820
Lab-8	Skilled Labour for Bridges		day	29,400	2,446
Lab-9	Coating Applicator for Bridges		day	20,160	1,677
Lab-10	Diver	Foreigner	day	126,000	10,483
Lab-12	Equipment Operator		day	18,270	1,520
Lab-13	Truck Driver		day	15,750	1,310
Lab-14	Road Block Installer		day	18,270	1,520
Lab-15	Rebar Worker		day	18,270	1,520
Lab-17	Welder		day	19,440	1,617
Lab-18	Form Worker		day	18,270	1,520
Lab-19	Plasterer		day	18,270	1,520
Lab-20	Skilled Labour		day	14,580	1,213
Lab-21	Unskilled Labour		day	12,150	1,011
Lab-23	Flagman		month	297,000	24,710
Lab-24	Civil Engineer	20 years of experience	month	2,704,000	224,973
Lab-25	Civil Engineer	15 years of experience	month	2,028,000	168,730
Lab-26	Civil Engineer	10 years of experience	month	1,550,000	128,960
Lab-27	Civil Engineer	5 years of experience	month	966,000	80,371
Lab-36	Surveyor		month	1,090,000	90,688
Lab-37	Assistant Surveyor		month	520,000	43,264
Lab-38	Drafter	5 years of experience	month	546,000	45,427
Lab-39	Accountant		month	743,000	61,818
Lab-40	Clerk		month	490,000	40,768
Lab-41	Driver		month	322,000	26,790
Lab-42	Office boy		month	338,000	28,122
Lab-43	Security Guard		month	266,000	22,131
Lab-46	Officer	Seaman (Foreigner)	day	40,500	3,370
Lab-47	Crew	Seaman	day	21,870	1,820
Lab-48	Secretary		day	1,081,000	89,939
Lab-49	Steel Bridge Fabrication Worker		day	18,900	1,572

Table3-6

Machinery Operation Cost

Cost Estimate Date/Bidding Date	May2017/ * *
Country	Myanmar
Project title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Exchange Rate	1USD=113.11JPY、1MMK=0.0832JPY

No.	Item	Specification	Unit	Applied Unit rate			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv.to Yen (JPY)
OPE-1	Asphalt finisher	Wheel type2.4-6.0m	day	511,816.00			42,583
OPE-3	Concrete pump truck	Boom type (90～110m3/h)	day	753,912.00			62,725
OPE-5	Tire roller	8-20t	day	270,040.00			22,467
OPE-6	Truck	3～3.5 t Capacity	day	249,544.96			20,762
OPE-8	Dump Truck	10 t Capacity	day	164,972.00			13,726
OPE-10	Truck crane	16t hang	day	181,398.56			15,092
OPE-11	Truck crane	4.9t hang	day	224,854.56			18,708
OPE-12	Backhoe	Crawler type Capacity0.35m3	day	195,797.38			16,290
OPE-13	Backhoe	Crawler type Capacity0.6m3	day	304,207.27			25,310
OPE-14	Bulldozer	15t	day	272,216.00			22,648
OPE-15	Bulldozer	20t	day	366,357.09			30,481
OPE-16	Motor grader	3.1m	day	324,440.00			26,993
OPE-17	Line marker	Hand guide type	day	64,242.40			5,345
OPE-18	Road roller	Macadam 10-12t	day	226,584.00			18,852
OPE-20	Vibration Roller	Tandem 3～4t	day	107,979.20			8,984
OPE-21	Vibration Roller	Hand guide type 0.8～1.1t_60～80kg	day	61,020.40			5,077
OPE-23	Generator	20kVA	day	43,877.60			3,651
OPE-25	Cement Slurry Plant	200-350kg×2each	hr	35,302.64			2,937
OPE-26	Crawler crane	50～55t hang	day	297,147.20			24,723
OPE-27	Rough terrain crane	25t hang	day	232,008.00			19,303
OPE-28	Giant breaker	600～800kg	day	196,022.87			16,309
OPE-29	All casing excavator	φ2,000mm	day	77,392.00			6,439
OPE-30	Concrete cutter	140 type	day	14,616.00			1,216
OPE-32	Concrete pump truck	Boom type (90～110m3/h)	hr	109,945.50			9,147
OPE-33	Tire roller	8-20t	hr	49,744.22			4,139
OPE-34	Truck	3～3.5 t Capacity	hr	52,720.76			4,386
OPE-35	Truck crane	16t hang	hr	29,257.83			2,434
OPE-36	Backhoe	Crawler type Capacity0.6m3	hr	48,496.82			4,035
OPE-37	Bulldozer	15t	hr	54,443.20			4,530
OPE-40	Line marker	Hand guide type	hr	11,680.44			972
OPE-41	Crawler drill	150kg	day	10,115.16		7,652	842
OPE-42	Crawler crane	100t hang	day	604,856.00			50,324
OPE-43	Crawler crane	80t hang	day	451,544.80			37,569
OPE-44	Crawler crane	120t hang	day	1,042,356.00			86,724
OPE-45	Crawler crane	180t hang	day	1,153,936.00			96,007
OPE-46	Crawler crane	200t hang	day	2,814,362.92			234,155
OPE-47	Crawler crane	275t hang	day	70,476.00	4,793.48		5,864
OPE-48	Crawler crane	350t hang	day	82,236.00	6,133.59		6,842

No.	Item	Specification	Unit	Applied Unit rate			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv.to Yen (JPY)
OPE-50	Generator	37/45kVA	day	230,664.01			19,191
OPE-51	Generator	50/60kVA	day	269,972.22			22,462
OPE-52	Generator	80/100kVA	day	399,237.30			33,217
OPE-53	Generator	125/150kVA	day	553,278.03			46,033
OPE-54	Generator	250kVA	day	1,058,950.01			88,105
OPE-55	Generator	270/300kVA	day	1,248,763.64			103,897
OPE-56	Generator	450/500kVA	day	3,005,007.47			250,017
OPE-58	Vibratory hanmmer	60kw	day	53,298.00	227.29		4,434
OPE-59	Vibratory hanmmer	240kw	day	204,309.00	864.29		16,999
OPE-60	Hydraulic hammer	181kw	day	97,713.00	1,313.59		8,130
OPE-61	Hydraulic hammer	S200	day	127,323.00	5,677.30		10,593
OPE-62	Tag boat	3000PS_330GT	day	4,210,954.43			350,351
OPE-63	Tag boat	2500PS_220GT	day	3,201,023.54			266,325
OPE-64	Tag boat	1500PS_130GT	day	1,975,033.38			164,323
OPE-65	Tag boat	1000PS_90GT	day	1,387,972.20			115,479
OPE-66	Tag boat	800PS_70GT	day	1,119,130.43			93,112
OPE-67	Tag boat	500PS_40GT	day	756,350.77			62,928
OPE-68	Tag boat	350PS_30GT	day	532,436.90			44,299
OPE-69	Water jet	for Piling(14.7MPa-325l/min)	day	60,192.00	356.10		5,008
OPE-70	Welder for stud rebar		day	0.00		273,280.00	0
OPE-71	Concrete mixer truck	4.4m3	day	171,633.30			14,280
OPE-72	Reverse circulation dril	Φ3200	day	670,516.46			55,787
OPE-73	Rough Terrain Crane	70 t	day	399,481.60			33,237
OPE-74	Wheel Loader	1.4 m3	day	157,872.44			13,135
OPE-75	Truck Crane	160 t	day	826,100.80			68,732
OPE-76	Truck Crane	200 t	day	1,162,392.00			96,711
OPE-77	Concrete leveler	5-8.5m	hr	3,688.10		1,246.40	307
OPE-78	Concrete finisher	5-8.5m	hr	6,157.70		2,272.80	512
OPE-79	Deep layer mixing machine	90kw_30m	day	47,880.00		290,400.00	3,984
OPE-80	Cement slurry plant	20m3/h	day	2,399.64		10,160.00	200
OPE-81	Deep layer mixing machine	90kw_20m	day	47,880.00		243,760.00	3,984

Table3-6

Material List

Cost Estimate Date/Bidding Date	May2017/＊＊
Country	Myanmar
Project title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Exchange Rate	1USD=113.11JPY、1MMK=0.0832JPY

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-1	Re-bar_SD345	D10-13, deformed bar	t	40,450	0	74,334
Mat-2	Re-bar_SD345	D16-25, deformed bar	t	40,450	0	72,534
Mat-3	Re-bar_SD345	D29-32, deformed bar	t	40,450	0	73,434
Mat-4	Re-bar_SD345	D35, deformed bar	t	40,450	0	76,134
Mat-5	Re-bar_SD345	D38, deformed bar	t	40,450	0	77,034
Mat-6	Re-bar_SD345	D42, deformed bar	t	40,450	0	77,934
Mat-7	Re-bar_SD345	D51, deformed bar	t	40,450	0	78,748
Mat-20	Precast concrete pipe	dia. 300mm	m	19,935.00		0
Mat-21	Precast concrete pipe	dia. 500mm	m	30,298.50		0
Mat-22	Precast concrete pipe	dia. 600mm	m	38,229.30		0
Mat-23	Precast concrete pipe	dia. 900mm	m	67,270.50		0
Mat-29	PVC Pipe	200mm	m	31,640.63		0
Mat-30	PVC Pipe	200mm / Elbow 45°	nos	81,021.63		0
Mat-31	PVC Pipe	200mm / Elbow 90°	nos	69,230.77		0
Mat-44	Sodding (Turf)	0	m2	2,160.00		0
Mat-47	Crushed stone	C-40	m3	41,850.00		0
Mat-48	Chemical admixture	for bottom slab of SPSP(2)	l	4,351.03		0
Mat-49	Sandy soil	0	m3	12,713.30		0
Mat-50	Sand	0	m3	12,713.30		0
Mat-51	Subbase course material		m3	11,124.14		0
Mat-52	Base course material		m3	18,434.29		0
Mat-53	Cement	Ordinal portland cement	t	84,600.00		0
Mat-54	Concrete	18 N/mm2	m3	75,857.40		0
Mat-55	Concrete	24 N/mm2	m3	79,885.80		0
Mat-56	Concrete	30 N/mm2	m3	88,029.00		0
Mat-57	Concrete	40 N/mm2	m3	99,257.40		0
Mat-58	Chemical admixture	for bottom slab of SPSP(1)	l	7,699.86		0
Mat-59	Chemical admixture	for CII	l	1,786.50		0
Mat-60	Chemical admixture	for Class A,B,CI,D,E	l	1,156.50		0
Mat-61	Fine aggregate	0	m3	36,296.47		0
Mat-62	Coarse aggregate	0	m3	36,296.47		0
Mat-68	Prime & Tack coat	0	kg	630.00		0
Mat-69	Asphalt Mix	AC14	m3	166,027.50		0
Mat-70	Asphalt Mix	AC14	m3	166,027.50		0
Mat-77	Rail	30 kg / m	m	0.00		0
Mat-80	Paint	for road marking	kg	0.00		0
Mat-81	Gasoline	0	L	630.00		0
Mat-82	Diesel	0	liter	621.00		0
Mat-88	Joit	Elastite t=20mm	m2	36,346.15		0
Mat-92	Cylindrical Form	φ165mm L750mm	nos	19,038.46		0
Mat-93	Cylindrical Form	φ170mm L800mm	nos	25,528.85		0
Mat-94	Cylindrical Form	φ500mm、t:0.6mm	m	103,629.81		0
Mat-95	Cylindrical Form	φ1100mm t:1.0mm	m	246,634.62		0
Mat-97	Primer for waterproof membrane	0	Ltr	0.00		747
Mat-98	Asphalt Waterproof membrane	0	m2	0.00		2,138
Mat-99	Drainage pipe	φ18mm	m	0.00		4,680
Mat-117	Geotextile	0	m2	0.00		324
Mat-119	Metallic Strip	width 60 mm	m	0.00		1,233
Mat-128	Precast Concrete Panel (Reinf. Ea	14cm	m3	208,105.20		0
Mat-134	Glass Beads	JIS R3301	kg	0.00		135
Mat-136	Grating	T-14･6 501 x 600mm	nos	128,725.96		0
Mat-137	Water	Running cost	kg	90.00		0
Mat-139	Indirect matrial	0	t	0.00		10,800
Mat-140	Steel plate	Base Material	t	0.00		103,500
Mat-141	Price extra	SS400	t	0.00		1,170
Mat-142	Price extra	SM400A_t<=38	t	0.00		3,150
Mat-143	Price extra	SM490YA_t<=25	t	0.00		11,700
Mat-144	Price extra	SM490YB_t<=25	t	0.00		14,400
Mat-145	Price extra	SM490YB_25<t<=38	t	0.00		17,100
Mat-146	Price extra	SM490YB_38<t<=50	t	0.00		19,800
Mat-147	Scrap	Heavy H1	t	0.00		19,350
Mat-148	PLS	SUS304	t	548,398.35		0
Mat-149	FB	SM400A_75*12	t	0.00		82,350

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-150	FB	SS400	t	0.00		79,200
Mat-151	L	SS400	t	0.00		72,900
Mat-152	STK	STK400	t	0.00		99,900
Mat-153	SGP	20A	t	0.00		712,500
Mat-154	RB	SM400A_19 ϕ	t	0.00		83,250
Mat-155	RB	SM400A_13 ϕ	t	0.00		85,050
Mat-156	RB	SS400A_19 ϕ	t	0.00		80,100
Mat-157	RB	SS400A_13 ϕ	t	0.00		81,900
Mat-158	RB	SS400A_10 ϕ	t	302,257.80		0
Mat-159	RB	SUS304_19 ϕ	t	302,257.80		0
Mat-160	EXP	XS51_690	t	287,759.70		0
Mat-161	TCB	S10T_M22	t	249,196.14		0
Mat-162	BN	SS400_M10	t	334,297.67		0
Mat-163	Steel sheet pile	TypeIII	t	927,504.00		0
Mat-164	Steel sheet pile	TypeII	t	905,423.80		0
Mat-165	Steel sheet pile	TypeV	t	954,365.63		0
Mat-167	H beam	H900x300x 16x28	t	0.00		78,300
Mat-168	H beam	H-100x100x6x8	t	0.00		66,600
Mat-169	H beam	H-400x400x13x21	t	0.00		69,300
Mat-170	H beam	H400x400x13x21	t	0.00		69,300
Mat-171	H beam	H488x300x11x18(9m x 3 pcs)	t	0.00		66,600
Mat-172	H beam	H488x300x11x18	t	0.00		66,600
Mat-173	H beam	150 x 150 x 7/10	t	0.00		64,800
Mat-174	H beam	200 x 200 x 8/12	t	0.00		64,800
Mat-175	H beam	250 x 250 x 9/14	t	0.00		64,800
Mat-176	H beam	300 x 300 x 10/15	t	0.00		64,800
Mat-177	H beam	350 x 350 x 12/19	t	0.00		66,600
Mat-178	H beam	200 x 100 x 5.5/8	t	0.00		64,800
Mat-179	H beam	300 x 150 x 6.5/9	t	0.00		64,800
Mat-180	H beam	350 x 175 x 7/11	t	0.00		64,800
Mat-181	H beam	400 x 200 x 8/13	t	0.00		64,800
Mat-182	H beam	500 x 200 x 10/16	t	0.00		66,600
Mat-183	H beam	H-500x400x22x12x4400	t	0.00		73,800
Mat-184	H beam	H-450x250x12x28x2000	t	0.00		88,200
Mat-185	H beam	H-500x400x5000	t	0.00		71,100
Mat-186	H beam	H-500x400x4500	t	0.00		71,100
Mat-187	H beam	H-488x300x11x18	t	0.00		66,600
Mat-188	H beam	H-800x300x14x26	t	0.00		75,600
Mat-189	H beam	H-800x300x14x26	t	0.00		75,600
Mat-190	Angle Bar Materials	L-6x75x75	t	0.00		63,900
Mat-191	Angle Bar Materials	L-100x100x10	t	0.00		68,400
Mat-192	Angle Bar Materials	L-130x130x12x3000	t	0.00		72,900
Mat-193	Angle Bar Materials	L-50x50x6	t	0.00		63,900
Mat-194	Angle Bar Materials	L-65×65×6	t	0.00		63,900
Mat-195	Angle Bar Materials	L-75×75×9	t	0.00		63,900
Mat-196	Angle Bar Materials	L-90×90×10	t	0.00		68,400
Mat-197	Steel plate	t=4.5mm	t	0.00		103,500
Mat-198	Steel plate	6.0<=t<=70mm	t	0.00		79,200
Mat-199	FB_SS400	6×50	t	0.00		79,200
Mat-200	FB_SS400	9×100	t	0.00		79,200
Mat-201	FB_SS400	9×125	t	0.00		79,200
Mat-202	FB_SS400	9×150	t	0.00		81,000

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-203	FB_SS400	9×200	t	0.00		81,000
Mat-204	FB_SS400	12×90	t	0.00		79,200
Mat-205	FB_SS400	12×100	t	0.00		79,200
Mat-206	Channel	C-150x75x6.5x10	t	0.00		63,900
Mat-207	Channel	C-300x90x9x13	t	0.00		66,600
Mat-208	Channel	C-380x100x10.5x16	t	0.00		68,400
Mat-209	Channel	100×50×5	t	0.00		64,800
Mat-210	Channel	150×75×6.5/10	t	0.00		64,800
Mat-211	Channel	200×90×8	t	0.00		64,800
Mat-212	Channel	250×90×9/13	t	0.00		65,700
Mat-213	Metal Deck Material	(2000x1000x200)	t	0.00		104,651
Mat-214	Metal Deck Material	(4000x2000x200)	t	0.00		104,651
Mat-215	Torshear High Strength Bolt	S10T・M22×55	nos	0.00		108
Mat-216	Torshear High Strength Bolt	S10T・M22×60	nos	0.00		111
Mat-217	Torshear High Strength Bolt	S10T・M22×65	nos	0.00		114
Mat-218	Torshear High Strength Bolt	S10T・M22×70	nos	0.00		118
Mat-219	Torshear High Strength Bolt	S10T・M22×75	nos	0.00		121
Mat-220	Torshear High Strength Bolt	S10T・M22×80	nos	0.00		125
Mat-221	Torshear High Strength Bolt	S10T・M22×85	nos	0.00		128
Mat-222	Torshear High Strength Bolt	S10T・M22×90	nos	0.00		131
Mat-223	Torshear High Strength Bolt	S10T・M22×95	nos	0.00		135
Mat-224	Torshear High Strength Bolt	S10T・M22×100	nos	0.00		138
Mat-225	Torshear High Strength Bolt	S10T・M22×105	nos	0.00		141
Mat-226	Torshear High Strength Bolt	S10T・M22×110	nos	0.00		145
Mat-227	Torshear High Strength Bolt	S10T・M22×115	nos	0.00		148
Mat-228	Torshear High Strength Bolt	S10T・M22×120	nos	0.00		152
Mat-229	Torshear High Strength Bolt	S10T・M22×140	nos	0.00		162
Mat-230	Torshear High Strength Bolt	S10T M16 X 85	nos	0.00		62
Mat-231	Torshear High Strength Bolt	S10T M24 X 135	nos	0.00		219
Mat-232	Torshear High Strength Bolt	S10T M24	t	0.00		238,419
Mat-233	Torshear High Strength Bolt	S10T M22	t	0.00		225,486
Mat-234	Torshear High Strength Bolt	S10T M16	t	0.00		233,514
Mat-235	FB Material (FB-140x300x12)	0	t	0.00		103,500
Mat-236	Round bar SS400	φ16	t	0.00		80,100
Mat-237	Round bar SS400	φ19	t	0.00		80,100
Mat-238	Round bar SS400	φ30 (32)	t	0.00		81,000
Mat-239	Round bar SS400	φ40(38)	t	0.00		81,900
Mat-240	Round bar SS400	φ50	t	0.00		82,800
Mat-241	Round bar SS400	φ60	t	0.00		87,300
Mat-242	Round bar SS400	φ80	t	0.00		90,000
Mat-243	Round bar SS400	φ90	t	0.00		90,000
Mat-244	Round bar SS400	φ120	t	0.00		90,900
Mat-245	Round bar SS400	φ130	t	0.00		90,900
Mat-246	Round bar SS400	φ150	t	0.00		90,900
Mat-247	Round bar SS400	φ200	t	0.00		90,900
Mat-248	Stripe steel plate	t=4.5mm	t	0.00		83,700
Mat-249	Steel-square- bar pipe	75×75×2.3	t	0.00		76,500

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-250	Steel-square- bar pipe	100×100×4.5	t	0.00		79,200
Mat-251	Steel-square- bar pipe	175×175×6	t	0.00		83,700
Mat-252	Steel-square- bar pipe	100×50×3.2	t	0.00		76,500
Mat-253	Column (STKR400)	200×200×6	t	0.00		81,000
Mat-254	Steel Pipe	(SGP) SGP-50A	t	0.00		650,847
Mat-255	Steel pipe (STK400)	φ27.2 t=1.9	t	0.00		99,900
Mat-256	Steel pipe (STK400)	φ34.0 t=2.3	t	0.00		98,100
Mat-257	Steel pipe (STK400)	φ42.7 t=2.3	t	0.00		95,400
Mat-258	Steel pipe (STK400)	φ48.6 t=2.3	t	0.00		95,400
Mat-259	Steel pipe (STK400)	φ60.5 t=2.3	t	0.00		95,400
Mat-260	Steel pipe (STK400)	φ76.3 t=2.8	t	0.00		95,400
Mat-261	Steel pipe (STK400)	φ89.1 t=3.2	t	0.00		95,400
Mat-262	Erection girder	0	t	0.00		0
Mat-263	Winch	9.8kN (1.0t)	nos	0.00	0	0
Mat-264	Φ1,200	SKY400_t=14	t		761.8	0
Mat-265	Φ1,200(Additional cost for short l	SKY400_t=14(2m)	t		248.6	0
Mat-266	Φ1,200(Additional cost for short l	SKY400_t=14(3m)	t		165.7	0
Mat-267	Φ1,200(Additional cost for short l	SKY400_t=14(4m)	t		124.3	0
Mat-268	Φ1,200	SKY400_t=16	t		788.9	0
Mat-269	Φ1,200	SKY490_t=14	t		850.3	0
Mat-270	Φ1,200	SKY490_t=16	t		877.5	0
Mat-271	φ=165.2, t =11mm, STK400	0	t		1,648.5	0
Mat-272	(1) Reinforcement Band	PL T=9 mm	ton		3,431.3	0
Mat-273	(2) Welding Material	PL T=14 mm	ton		0.0	0
Mat-274	(2) Welding Material	PL T=16 mm	ton		0.0	0
Mat-275	(3) Pad eyes	PL T=22 mm	ton		3,223.5	0
Mat-276	(4) Welded End Plate	PL T=12 mm	no		12.4	0
Mat-277	(5) Nonweld Interlocking Range	0	no		135.0	0
Mat-278	Flyash	0	t	0.00		10,800
Mat-279	Chemical admixture	for water prevention	kg	0.00		252
Mat-280	Bentonite	0	t	0.00		21,780
Mat-281	Stud rebar	D22_1000mm	nos	0.00		1,485
Mat-282	Stud rebar	D22_700mm	nos	0.00		1,319
Mat-283	Re-bar_SD390	D10-13, deformed bar	t	0.00		0
Mat-284	Re-bar_SD390	D16-25, deformed bar	t	40,449.97	0	75,234
Mat-285	Re-bar_SD390	D29-32, deformed bar	t	40,449.97	0	76,134
Mat-286	Re-bar_SD390	D35, deformed bar	t	40,449.97	0	78,834
Mat-287	Re-bar_SD390	D38, deformed bar	t	40,449.97	0	79,734
Mat-288	Re-bar_SD390	D42, deformed bar	t	40,449.97	0	80,634
Mat-289	Re-bar_SD390	D51, deformed bar	t	40,449.97	0	81,539
Mat-292	Mechanical joint	D35, deformed bar	nos	0.00		2,493
Mat-293	Mechanical joint	D38, deformed bar	nos	0.00		3,006
Mat-294	Mechanical joint	D32, deformed bar	nos	0.00		1,818
Mat-295	Mechanical joint	D51, deformed bar	nos	0.00		5,832
Mat-296	Hydraulic Jack 200t	0	nos	0.00		999,000
Mat-297	Manual Pump HP-5	0	nos	0.00		372,600
Mat-310	Frame	for portal crane	t	0.00	3,890.90	0.00
Mat-311	Moving Equipment	for portal crane	nos	0.00	98,665.02	0.00
Mat-312	Hoist (Winch)	for portal crane	nos	0.00	151,975.95	0.00
Mat-313	Adhesion material	Epoxy resin	kg	0.00		2,250
Mat-314	Flap Gate	1000*1000	nos	0.00		5,392,800
Mat-315	Flap Gate	1500*2000	nos	0.00		7,704,000
Mat-353	Bearing for Cable stayed bridge	Bearing For Horizontal Force_2300kN	nos	0.00		11,880,000.0
Mat-354	Bearing for Cable stayed bridge	Rocking Bearing_3700kN_Only Core	nos	0.00		49,500,000.0
Mat-355	Bearing for Cable stayed bridge	Pivot Bearing_58100kN	nos	0.00		93,447,000.0
Mat-356	Bearing for Cable stayed bridge	Pin Roller Bearing_20900kN	nos	0.00	0.0	38,844,000.0

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-357	Bearing for Cable stayed bridge	Rocking Bearing_3700kN_Frame	nos	0.00		**0.0**
Mat-360	Anchor frame	for Rocking Bearing_3700kN	nos	0.00		**0.0**
Mat-361	Anchor frame	for Pivot Bearing_58100kN	nos	0.00		**0.0**
Mat-362	Anchor frame	for Pin Roller Bearing_20900kN	nos	0.00		**0.0**
Mat-365	Bearing for Steel box girder	for P13	nos	0.00	**41,661.9**	**0.0**
Mat-366	Bearing for Steel box girder	for P14	nos	0.00	**45,580.5**	**0.0**
Mat-367	Bearing for Steel box girder	for P15	nos	0.00	**43,330.5**	**0.0**
Mat-368	Bearing for Steel box girder	for P16	nos	0.00	**43,330.5**	**0.0**
Mat-369	Bearing for Steel box girder	for P17	nos	0.00	**43,330.5**	**0.0**
Mat-370	Bearing for Steel box girder	for P18	nos	0.00	**43,330.5**	**0.0**
Mat-371	Bearing for Steel box girder	for P19	nos	0.00	**45,580.5**	**0.0**
Mat-372	Bearing for Steel box girder	for P20	nos	0.00	**39,820.5**	**0.0**
Mat-375	Bearing for PC box girder	for A1	nos	0.00	**42,390.0**	**0.0**
Mat-376	Bearing for PC box girder	for P1	nos	0.00	**76,508.1**	**0.0**
Mat-377	Bearing for PC box girder	for P2	nos	0.00	**71,206.2**	**0.0**
Mat-378	Bearing for PC box girder	for P3	nos	0.00	**71,206.2**	**0.0**
Mat-379	Bearing for PC box girder	for P4	nos	0.00	**76,508.1**	**0.0**
Mat-380	Bearing for PC box girder	for P5	nos	0.00	**39,411.9**	**0.0**
Mat-381	Bearing for PC box girder	for P20	nos	0.00	**42,390.0**	**0.0**
Mat-382	Bearing for PC box girder	for P21	nos	0.00	**76,508.1**	**0.0**
Mat-383	Bearing for PC box girder	for P22	nos	0.00	**76,508.1**	**0.0**
Mat-384	Bearing for PC box girder	for P23	nos	0.00	**71,206.2**	**0.0**
Mat-385	Bearing for PC box girder	for P24	nos	0.00	**76,508.1**	**0.0**
Mat-386	Bearing for PC box girder	for P25	nos	0.00	**81,670.5**	**0.0**
Mat-387	Bearing for PC box girder	for A2	nos	0.00	**43,617.6**	**0.0**
Mat-390	Bearing for PC I girder (On Ramp)	for A01	nos	0.00	**1,063.8**	**0.0**
Mat-391	Bearing for PC I girder (On Ramp)	for P01	nos	0.00	**842.4**	**0.0**
Mat-392	Bearing for PC I girder (On Ramp)	for P02	nos	0.00	**842.4**	**0.0**
Mat-393	Bearing for PC I girder (On Ramp)	for P03	nos	0.00	**842.4**	**0.0**
Mat-394	Bearing for PC I girder (On Ramp)	for P5	nos	0.00	**1,292.4**	**0.0**
Mat-400	Expansion Joint	P10	m	0.00	0.00	1,045,807.86
Mat-401	Expansion Joint	P13	m	0.00	0.00	1,271,790.40
Mat-402	Expansion Joint	P5	m	0.00	0.00	1,787,647.06
Mat-403	Expansion Joint	P20	m	0.00	0.00	1,787,647.06
Mat-404	Expansion Joint	A1	m	0.00	0.00	1,228,676.47
Mat-405	Expansion Joint	A2	m	0.00	0.00	1,228,676.47
Mat-406	Expansion Joint	PO4	m	0.00	0.00	864,705.88
Mat-407	Expansion Joint	AO1	m	0.00		82,620
Mat-410	Composite barrier	H = 1100	m	0.00		0
Mat-411	Barrier for carriage way	H = 900	m	0.00		0
Mat-412	Catch Basin	0	nos	0.00		0
Mat-413	Footway_Expanded metal	SM400_600*2400	ton	0.00		713,333
Mat-414	Hot-Dip Galvanization	HDZ35	t	0.00		54,000
Mat-415	Hot-Dip Galvanization	HDZ55	t	0.00		55,800
Mat-416	Anchor Bolt	M16×100	nos	0.00		185
Mat-417	Ceramic Insert	M12	nos	0.00		257
Mat-418	Embedded materials	Sheath for 12S15.2	m	0.00		631

No.	Item	Specification	Unit	Applied unit price		
				Local (MMK)	Foreign (USD)	Main (JPY)
Mat-419	Embedded materials	Sheath for 4S15.2	m	0.00		311
Mat-420	Embedded materials	Sheath for 3S12.7	m	0.00		311
Mat-421	Embedded materials	Sheath for PC Bar φ32	m	0.00		213
Mat-422	Embedded materials	Deviator pipe for 19S15.2 at Deviator (L=0.812m)(	nos	0.00		1,980
Mat-423	Embedded materials	Deviator pipe for 19S15.2 at Support Crossbeam (	nos	0.00		3,960
Mat-424	Embedded materials	Sleeve pipe for 19S15.2(SGP)	nos	0.00		4,590
Mat-425	PC bar	SBPR 930/1180 φ32mm(3m)	ton	0.00		306,900
Mat-426	PC Strand	19S15.2 (SWPR7BL)_External cable type	kg	0.00		671
Mat-427	Anchor	Anchor (ADnC15 Freyssine)	set	133,650.00		0
Mat-428	PC Strand	12S15.2(SWPR7BL)	kg	0.00		298
Mat-429	PC strands	3S12.7(SWPR7BL)	kg	0.00		285
Mat-430	PC Strand	4S15.2(SWPR7BL)	kg	0.00		298
Mat-431	Anchor	Anchor (ADnC13 Freyssine)	set	48,600.00		0
Mat-432	PC bar	SBPR 930/1180 φ32mm(3m)	kg	3,007.13		0
Mat-433	Anchor_fix_side	Anchor (165*165mm_t=32mm)	set	0.00		3,690
Mat-434	Joint	for PC bar φ32mm	set	0.00		1,935
Mat-435	Anchor_prestressing_side	Anchor (165*165mm_t=32mm)	set	0.00		3,105
Mat-436	PC Strand	12S12.7(SWPR7BL)	kg	1,549.13		0
Mat-437	Anchor	Anchor (AC15 Freyssine)	set	0.00		14,400
Mat-438	Joint filler	15mm x 10mm	m	0.00		351
Mat-439	Non-shrink Mortar	0	kg	1,351.80		0
Mat-440	PC precast pannel	0	nos	260,878.50		0
Mat-441	Joint filler	t=10mm	m2	0.00		351
Mat-442	Joint filler	t=20mm	m2	0.00		702
Mat-443	Rubber Plate	t=10mm (10x300x600)	m2	0.00		11,610
Mat-444	Styrene Foam	b=50mm (50x500x1000)	m3	0.00		19,530
Mat-445	Geotextile	0	m2	0.00		324
Mat-446	Plastic sheet	for approach road	m2	0.00		324
Mat-447	Rebar net	Φ6 / 150x150mm	m2	0.00		239
Mat-448	PLAIN DOWEL BAR	φ28	t	0.00		76,500
Mat-449	PL	SM570 t≦16	t	0.00		145,800
Mat-450	PL	SM570-H 40<t≦100	t	0.00		147,600
Mat-451	BULB	SM490YA	t	0.00		197,472
Mat-452	U Bolt	SS400_25C	nos	400.24		0
Mat-453	U Bolt	SS400_15C	nos	346.15		0
Mat-454	ANC	Concrete anchor_SS400_M16*125	nos	2,217.55		0
Mat-455	Pipe brace	0	nos	8,729.57		0
Mat-456	Anchor	M12	nos	713.94		0
Mat-457	BN	M12_40	nos	472.72		0
Mat-458	Steel post	Φ60.5mm / 4.5m	nos	107,740.38		0
Mat-459	Bridge Name Plate	1800*1200	nos	1,675,298.08		0
Mat-460	Cable Damper	1set 3nos 37H,70H	nos	0.00	0.00	576,900
Mat-461	Bearing for Steel box girder	for P5	nos	0.00	71,006.19	0
Mat-462	Bearing for Steel box girder	for P6	nos	0.00	66,524.09	0
Mat-463	Bearing for Steel box girder	for P7	nos	0.00	70,980.73	0
Mat-464	Bearing for Steel box girder	for P10	nos	0.00	67,266.47	0
Mat-465	Expansion Joint	P5	m	0.00		1,228,676

OHC-　　1

Item:　Overhead Cost　　Sourse:

Specification:　PKG1　　1　LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
対象額　工事原価＝直接工事費＋共通仮設費＋現場管理費										
直接工事費 （円）	10,911,338,476									
共通仮設費 （円）	1,316,080,834									
現場管理費 （円）	1,329,547,053									
Total(工事原価) （円）	13,556,966,363									
一般管理費率　H28国土　P65より、工事原価が30億円以上のため、以下の一般管理費等率算定式により算出された率を使用する										
	Gp:一般管理費等率(%)									
	Gp=	7.41%								
一般管理費	工事原価×一般管理費等率	1	式			1,004,571,208			1,004,571,208	
Total		1	LS						1,004,571,208	
Unit price		1	LS						1,004,571,208	

General Temporary Works_List_Package1

No.	Item	Specification	Unit	Unit price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY		Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY
GTW-1	Rate Calculation	GTP_PKG1	LS			218,226,770	218,226,770	1	0	0.0	218,226,770	218,226,770
GTW-2	Material shipping cost	Yokohama or Vietnam-Yangon	LS	10,441,630	2,817,500.0	77,044,202	396,600,371	1	10,441,630	2,817,500.0	77,044,202	396,600,371
GTW-3	Machinery shipping cost	Yokohama or Singapole-Yangon	LS	96,853,000	799,000.0	175,431,524	273,864,584	1	96,853,000	799,000.0	175,431,524	273,864,584
GTW-4	Assembly & Disassembly	Machinery	LS			2,300,600	2,300,600	1	0	0.0	2,300,600	2,300,600
GTW-5	Cutting and disposing tree	PKG1	LS	397,578			33,078	1	397,578	0.0	0	33,078
GTW-15	Safety Related Cost for Navigation	Guard Boat, Buoy	LS	321,720,000	25,200.0		29,617,476	1	321,720,000	25,200.0	0	29,617,476
GTW-16	Safety Related Cost for Traffic	Guardman/Traffic signboard	LS	45,187,000			3,759,558	1	45,187,000	0.0	0	3,759,558
GTW-17	Safety Related Cost for Traffic	Temporary fence	LS	22,737,800			1,891,785	1	22,737,800	0.0	0	1,891,785
GTW-18	Site administration cost	Electricity/Water well	LS	84,850,000	15,000.0		8,756,170	1	84,850,000	15,000.0	0	8,756,170
GTW-19	Quality control test	0	LS	262,812,100	32,208.0	15,444,000	40,953,014	1	262,812,100	32,208.0	15,444,000	40,953,014
GTW-20	Site expense	Installation/Remove, Maintenance	LS	10,610,000			882,752	1	10,610,000	0.0	0	882,752
GTW-21	Equipment for General Use	PKG1	LS	4,074,429,087	0.0	0	338,992,500	1	4,074,429,087	0.0	0	338,992,500
GTW-22	Others	Project information board	LS	2,430,000			202,176	1	2,430,000	0.0	0	202,176
Total									4,932,468,194	3,688,908.0	488,447,096	1,316,080,834

GTW 1

Item: Rate Calculation Sourse: H28国土P<33>

Specification: GTP_PKG1 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
共通仮設費　率計算による部分										
共通仮設費(率計算)	対象額×(Kr＋補正係数)	1	LS			218,226,770			218,226,770	
対象額	10,911,338,476									
直接工事費	10,911,338,476									
支給品費＋無償貸付機械等評価額	0									
事業損失防止施設費	0									
準備費に含まれる処分費	0									
共通仮設比率 (①＋②)	2.00									
①共通仮設比率 Kr										
鋼橋工事	2									
②補正係数										
大都市を考慮した補正　(対象外)	-									
施工地域･工事場所 (地方･一般交通の影響あり)										
Total		1	LS						218,226,770	
Unit price		1	LS				0	0	218,226,770	

GTW - 2

Item: Material shipping cost Sourse:

Specification: Yokohama or Vietnam-Yangon 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
仮設資材輸送費										
Yokohama - Yangon										
建設資材 片道	別途算定表より	1.00	LS	8,744,500		77,044,202	8,744,500.00		77,044,202	
Vietnam ー Yangon										
建設資材 片道	別途算定表より	1.00	LS	1,697,130.00	2,817,500.0		1,697,130.00	###########		
Vietnam ー Yangon	for cable stayed bridge main girder									
建設資材 片道	別途算定表より	1.00	LS							
*USD1003.3 * weight of cable stayed girder										
Vietnam ー Yangon	for cable stayed bridge main girder									
建設資材 片道	別途算定表より	1.00	LS							
*USD1003.3 * weight of cable stayed girder										
Total		1	LS				10,441,630	2,817,500	77,044,202	
Unit price		1	LS				10,441,630	2,817,500	77,044,202	

GTW - 3

Item: Machinery shipping cost Sourse:

Specification: Yokohama or Singapole-Yangon 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
建設機材輸送梱包費 往復										
Yokohama - Yangon										
建設資材 往復	別途算定表より	1.00	LS	82,852,000		175,431,524	82,852,000.00		175,431,524	
Singapole ー Yangon										
建設資材 往復	別途算定表より	1.00	LS	14,001,000	799,000		14,001,000.00	(799,000.00)		
Total		1	LS				96,853,000	799,000	175,431,524	
Unit price		1	LS				96,853,000	799,000	175,431,524	

GTW - 4

Item: Assembly & Disassembly Sourse: JICAガイドライン 68

Specification: Machinery 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
運搬費 分解･組立										
重機械分解･組み立て										
深層混合処理機	2軸 三点LSくい打ち機									
特殊作業員		41.20	人日			48,500			1,998,200	
トラッククレーン運転単価	25t吊	6.30	台日			48,000			302,400	
諸雑費	5%	1.00	LS							
Total		1	LS						2,300,600	
Unit price		1	LS				0	0	2,300,600	

GTW - 5

Item: Cutting and disposing tree　　Sourse: JICAガイドライン 68

Specification: PKG1　　1 LS

351,510.00

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
準備費 伐開除根に伴う廃棄物処理										
伐開･除根に伴う廃棄物の運搬費		63,894	km/t	0.72			46,067.57			
伐開･除根に伴う建設廃棄物	13,019 m3*1.8 t/m3	23434.00	t	15.00			351,510.00			
Total		1	LS				397,578			
Unit price		1	LS				397,578	0	0	

GTW - 15

Item: Safety Related Cost for Navigation Sourse: JICAガイドライン 68

Specification: Guard Boat, Buoy 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 航路安全対策										
工事警戒船										
曳舟	300PS, 25t	28	月	4,500,000			126,000,000.00			
スピードボート	4 sheet	2	No.	840,000			1,680,000.00			70%償却
船員										
曳舟 高級船員	2-シフト制	56.00		1,125,000			63,000,000.00			
船員	2-シフト制	56.00		607,500			34,020,000.00			
スピードボート 高級船員	2-シフト制	56.00		1,125,000			63,000,000.00			
船員	2-シフト制	56.00		607,500			34,020,000.00			
Navigation Buoy		7.00	No.		3,000.00			(21,000.00)		
Instalation of Buoy		7.00	No.		600.00			(4,200.00)		
Total		1	LS				321,720,000	25,200		
Unit price		1	LS				321,720,000	25,200	0	

GTW - 16

Item: Safety Related Cost for Traffic for Pay Item 01600-01 Sourse: JICAガイドライン 68

Specification: Guardman/Traffic signboard 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 安全施設類										
Traffic Manager		25	月・人	49,000			1,225,000.00			橋梁世話役相当
Traffic Watchman		146	月・人	297,000			43,362,000.00			
Temporary Barricade-TB-1	Chain/poles	4	Nos	50,000			200,000.00			
Traffic Signboard:Guide	Myanmer Standard	2	Nos	50,000			100,000.00			
Traffic Signboard:Causion	Myanmer Standard	6	Nos	50,000			300,000.00			
Total		1	LS				45,187,000			
Unit price		1	LS				45,187,000	0	0	

GTW - 17

Item: Safety Related Cost for Traffic Sourse: JICAガイドライン 68

Specification: Temporary fence 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 ヤード安全施設類										
Security Fence-SF-1:H>2.0m	Wire net / Iron sheet	227	m	8,000			1,816,000.00			Diversion Road-step-1
Security Fence-SF-2:H>2.0m	Wire net / Iron sheet	302	m	8,000			2,416,000.00			Existing Road
Security Fence-SF-3:H>2.0m	Wire net / Iron sheet	110	m	8,000			880,000.00			BAGO Bridge-Entrance
Security Fence-SF-4:H>2.0m	Wire net / Iron sheet	91	m	8,000			728,000.00			BAGO Bridge-Right side
Security Fence-SF-5:H>2.0m	Wire net / Iron sheet	347	m	8,000			2,776,000.00			Existing Road (Thanlyin)
Sub-total		1,077								
Board Fence-BF-1:H>2.4m	Iron sheet/board	222	m	43,500			9,657,000.00			Thanlyin Bridge-Exit
Board Fence-BF-2:H>2.4m	Iron sheet/board	100	m	43,500			4,350,000.00			Diiversion Road-step-2
Sub-total										
Entrance Gate :H>2.4m		1.00	箇所	114,800			114,800.00			
Total		1	LS				22,737,800			
Unit price		1	LS				22,737,800	0	0	

GTW - 18

Item: Site administration cost　　Sourse: JICAガイドライン 68

Specification: Electricity/Water well　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
電力･用水使用料										
工事事務所										
電気料金	初期料金	1.00	LS	500,000			500,000.00			
電気料金	基本料金	28	月	1,250,000			35,000,000.00			
発動発電機	300kva	1.00	個		15,000			(15,000.00)		50%償却
オイル代		28	月	1,200,000			33,600,000.00			月150h使用
井戸による水道設備										
井戸掘削費及び井戸設備	3インチ径、100m深	2.00	LS	7,875,000			15,750,000.00			
Total		1	LS				84,850,000	15,000		
Unit price		1	LS				84,850,000	15,000	0	

GTW - 19

Item: Quality control test Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
載荷試験										
衝撃載荷試験、鋼管杭	φ1.2m	6	箇所			2,574,000			15,444,000	IHC－S200
静的載荷試験、場所打杭	φ1.5m	1	箇所	57,886,500			57,886,500.00			
Koden Test		116	個	358,600			41,597,600.00			
Sonic Test		116	個	1,408,000			163,328,000.00			
追加ボーリング										
延長		200	m		63.00			(12,600.00)		
SPT		200	箇所		13.00			(2,600.00)		
Undisturbed sampling		40	箇所		50.00			(2,000.00)		
追加ボーリング室内試験										
Natural Moisture Content		200	個		8.00			(1,600.00)		
Specific Gravity		200	個		8.00			(1,600.00)		
Particle Size Distribution		200	個		28.00			(5,600.00)		
Atterberg Limit Test		200	個		16.00			(3,200.00)		
Unconfined Compression Strength		24	個		36.00			(864.00)		
Consolidation test		24	個		67.00			(1,608.00)		
Consolidation test		8	個		67.00			(536.00)		
Total		1	LS				262,812,100	32,208	15,444,000	
Unit price		1	LS				262,812,100	32,208	15,444,000	

GTW - 20

Item: Site expense Sourse:

Specification: Installation/Remove, Maintenance 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
営繕費										
コンサルタント現場詰所設営・撤去										
設営・撤去	平均3.0名×10m2=30m2	30.0	m2	300,000			9,000,000.00			
コンサルタント事務所備品										
机		3.0	台	65,000			195,000.00			損料率 44%
椅子		3.0	脚	45,000			135,000.00			損料率 44%
ソファーセット		1.0	LS	200,000			200,000.00			損料率 44%
本棚		1.0	個	130,000			130,000.00			損料率 44%
エアコン		1.0	台	600,000			600,000.00			損料率 48%
冷蔵庫		1.0	台	350,000			350,000.00			損料率 48%
Total		1	LS				10,610,000			
Unit price		1	LS				10,610,000	0	0	

GTW - 21

Item: Equipment for General Use Sourse:

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Crawler crane	200t hang	750.00	days	3,433,534	0	0	2,575,150,240	0	0	Mac-d(14)
*According to Equipment shedule, 25 months * 30 days = 750 days										
Barge	300t	840.00	days	727,825	0	0	611,372,596	0	0	Mac-d(22)
*According to Equipment shedule, 28 months * 30 days = 840 days										
Tag boat	1000PS_90GT	840.00	days	1,057,031	0	0	887,906,250	0	0	Mac-d(39)
*According to Equipment shedule, 28 months * 30 days = 840 days										
Total		1	LS				4,074,429,087			
Unit price		1	LS				4,074,429,087	0	0	

GTW - 22

Item: Others Sourse:

Specification: Project information board 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
工事案内板										
工事案内板(大)	1.8m x 3.6m, 支柱付	2.00	枚	675,000			1,350,000.00			
工事案内板(小)	0.9m x 1.8m, 支柱付	4.00	枚	270,000			1,080,000.00			
Total		1	LS				2,430,000			
Unit price		1	LS				2,430,000	0	0	

General Temporary Works Packing and Shipping Cost Calculation Table (TYO:YOKOHAMA→RGN)

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing Type	Packing Fee (Reference to JICA Manual)	Yokohama Port Charges(Yen)					Ocean Freight (YKHM-YNG) (Yen)	Loading Fee (YNG) (MMK)	Yangon Inland Tran. (YNG-Site) (MMK)		Document (YNG) (MMK)	Ocean Fraight (YNG-YKHM) (Yen)	Loading Fee (YKHM Port) (Yen)	Insurance (Yokohama-Site)		Total of Packing and Transportation Fee (Yen)		Nos.	Total of Packing and Transportation Fee (Yen)		Remarks
													Custom Clearance	Loading Fee	Documen-tation	Application for Export	Total			One Way (MMK)	Return Trip (MMK)				One Way (Yen)	Round Trip (Yen)	Yen Portion (Yen)	LocalPortion(MMK)		Yen Portion (Yen)	LocalPortion(MMK)	
1	PC Cable	PC Strand,Protect Pipe and Others	13,333,000	240.00					24.00	20ftcontainer	Crate	228,060	5,900	96,000	20,000	30,000	151,900	215,000	130,500	272000		0	0	0	340,352	0	935,312	345,500	15.00	14,029,676	345,500	For Cable Stayed Bridge
2	Ancinary Material	Protect pipe and others	6,666,667	150.00					30.00	40ftcontainer	Case	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	307,189	0	974,164	345,500	15.00	14,612,463	345,500	For Cable Stayed Bridge
3	Cable damper		25,670,000	2.00					30.00	40ftcontainer	Palette	155,925	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	401,724	0	948,549	345,500	1.00	948,549	345,500	For Cable Stayed Bridge
4	PC cable	PC Strand	29,000,000	156.00					24.00	20ftcontainer	Crate	228,060	5,900	96,000	20,000	30,000	151,900	215,000	130,500	272000		0	0	0	418,289	0	1,013,249	345,500	8.00	8,105,993	345,500	For PC Box
5	Ancinary Material	Sheath Pipe	1,750,000	6.00					30.00	40ftcontainer	Crate	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	282,731	0	949,706	345,500	2.00	1,899,411	345,500	For PC Box
6	Ancinary Material	Anchor and Others	30,000,000	25.00					30.00	40ftcontainer	Case	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	423,264	0	1,090,239	345,500	2.00	2,180,478	345,500	For PC Box
7	Expansion Joint	Metal Steel	7,200,000	10.00					30.00	40ftcontainer	Crate	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	309,842	0	976,817	345,500	20.00	19,536,347	345,500	For Steel Box and PC Box Girder
8	Pavement	Modified Asphalt	4,000,000	30.00					30.00	40ftcontainer	Palette	143,775	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	293,924	0	828,599	345,500	2.00	1,657,197	345,500	For Steel Slab Aspalt
9	Pavement	Waterproof Material	30,000,000	10.00					30.00	40ftcontainer	Palette	155,925	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	423,264	0	970,089	345,500	1.00	970,089	345,500	For Steel Slab Aspalt
10	Reinforcement bar		133,142,056	2313.00					2,313	On Barge	on barge	6,245,100	5,900	9,252,000	20,000	30,000	9,307,900	34,011,046	130,500	1337024		0	0	0	20,551,975	0	70,116,021	34,141,546	1.00	70,116,021	34,141,546	*on Unit rate Reinforcement bar
11	Reinforcement bar		133,142,056	2313.00					2,313	On Barge	on barge	6,245,100	5,900	9,252,000	20,000	30,000	9,307,900	34,011,046	130,500	1337024		0	0	0	20,551,975	0	70,116,021	34,141,546	1.00	70,116,021	34,141,546	*on Unit rate Reinforcement bar
																													Sub-total	63,940,202	3,109,500	*Except for 10,11

1.0 USD= 113.11

0.0832

YGN:Yangon port

Packing, Documentation to export, Freight of Container from Yokohama to Yangon (Yen)

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (Yen)	Port Charge (YGN) (MMK)	Inland Transport		Document (YNG) (USD)	Height (YGN-Yokohama) (Yen)	Port Charge (YKHM) (Yen)	Insurance		Packing & Freight (Fr)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (Yen)	Return (Yen)	Foreign (Yen)	Local (MMK)		Foreign (Yen)	Local (MMK)	
1	Bearing for Cable Stayed Bridge	HorizontalBearing, Pivot Bearing,Pin Roller Bearing	193,101,320							40ftContainer	1,000,000	130,500	272000	0	0	0	0	0	0	1,000,000	402,500	7	7,000,000	2,817,500	Referrence:Quotation No.
2	Stud fof SPSP	Connector Between SPSP and Pile Cap	32,894,000							On Barge	872,000	130,500	272000	0	0	0	0	0	0	872,000	402,500	7	6,104,000	2,817,500	
																						Sub-total	13,104,000	5,635,000	
																						Total	77,044,202	8,744,500	

General Temporary Works Packing and Shipping Cost Calculation Table (VN→RGN)

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (USD)	Port Charge (YGN) (MMK)	Inland Trasport		Document (YNG) (USD)	Hreight (YGN-Yokohama) (USD)	Port Charge (VTN) (USD)	Insurance		Packing & Freight (Fr)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (USD)	Return (USD)	Foreign (USD)	Local (MMK)		Foreign (USD)	Local (MMK)	
1	Bearing for PC box Girder	Elastomeric Bearing for A1 to P5	11,526,500							40ftContainer	4,000	130,500	272000	0.00	0	0	0	0	0	4,000	402,500	4	16,000	1,610,000	
2	Bearing for PCI Girder(On Ramp)	Elastomeric Bearing (Pad Type)	597,000							40ftContainer	2,000	130,500	272000	0	0	0	0	0	0	2,000	402,500	1	2,000	402,500	
3	Steel Pipe	φ1,200mm for SPSP	5,678,000							On Barge	839,565	130,500	272000	0	0	0	0	0	0	839,565	402,500	2	1,679,130	805,000	Including Accessory
																						合 計	1,697,130	2,817,500	

Construction Equipment Packing and Transportation Cost (Yokohama→Site)

No.	Item	Specification	Base Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Referece	Packing Type	Packing Fee (Reference to JICA Manual)	Yokohama Port Charges(Yen)					Ocean Freight (YKHM-YNG) (Yen)	Loading Fee (YNG) (MMK)	Yangon Inland Tran. (YNG-Site) (MMK)		Document (YNG) (MMK)	Ocean Fraight (YNG-YKHM) (Yen)	Loading Fee (YKHM Port) (Yen)	Insurance (Yokohama-Site)		Total of Packing and Transportation Fee (Yen)		Nos.	Total of Packing and Transportation Fee (Yen)		Remarks
													Custom Clearance	Loading Fee	Documen-tation	Application for Export	Total			One Way (MMK)	Return Trip (MMK)				One Way (Yen)	Round Trip (Yen)	Yen Portion (円)	LocalPortion (MMK)		Yen Portion (円)	LocalPortion (MMK)	
1	SBS Erection Girder	H-Beam, ChannelAangle	9,640,000	21.79					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	354,053	708,106	2,058,181	805,000	28.00	57,629,078	22,540,000	
2	SBS Erection Girder	Main Hoist, Jack and Moving Equip.	17,900,000	12.50					30.00	40ftContainer	Crate	276,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	395,144	790,287	2,046,087	1,077,000	4.00	8,184,349	4,308,000	
3	SBS Erection Girder	Ancillary Equipment	35,400,000	24.00					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	482,199	964,399	2,220,199	1,077,000	1.00	2,220,199	1,077,000	
4	SBS Erection Girder	OilHydraulic Set	80,000,000	20.00					30.00	40ftContainer	Case	312,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	704,068	1,408,135	2,663,935	1,077,000	1.00	2,663,935	1,077,000	
5	Cable Stay Erection Girder	H-Beam, ChannelAangle	7,950,000	18.38					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	345,646	691,292	1,947,092	1,077,000	16.00	31,153,474	17,232,000	
6	Cable Stay Erection Girder	Main Hoist, Jack and Moving Equip.	19,300,000	16.90					30.00	40ftContainer	Crate	276,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	402,108	804,216	2,060,016	1,077,000	2.00	4,120,032	2,154,000	
7	Cable Stay Erection Girder	OilHydraulic Set	27,000,000	2.00					30.00	40ftContainer	Case	312,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	440,413	880,825	2,136,625	1,077,000	2.00	4,273,251	2,154,000	
8	Deep Soil Mixing	Soil Mixing Machine (For 2 machines)	43,500,000	26.25					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	522,494	1,044,988	2,300,788	1,077,000	8.00	18,406,303	8,616,000	
9	Deep Soil Mixing	Cement Mixing Plant For(2 Sets)	39,200,000	17.00					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	501,103	1,002,206	2,258,006	1,077,000	2.00	4,516,012	2,154,000	
10	Driving SPSP	Hydraulic Hammer 200kNm	135,000,000	21.10					30.00	40ftContainer	Crate	276,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	977,672	1,955,344	3,211,144	1,077,000	1.00	3,211,144	1,077,000	
11	Driving SPSP	Power Pack for above, 750kw	30,000,000	11.20					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	455,337	910,673	2,166,473	1,077,000	1.00	2,166,473	1,077,000	
12	Driving SPSP	Vibration Hamme r240kw	68,000,000	10.20					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	644,372	1,288,745	2,544,545	1,077,000	2.00	5,089,089	2,154,000	
13	Short Line Matching Equipment	Hydraulic equipment	42,000,000	16.50					30.00	40ftContainer	Case	380,100.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	515,032	1,030,064	2,285,864	1,077,000	1.00	2,285,864	1,077,000	
14	Short Line Matching Equipment	Frame and Form	10,000,000	24.75					30.00	40ftContainer	Bandle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	355,844	711,688	1,967,488	1,077,000	15.00	29,512,321	16,155,000	
																									合 計		31,866,444	14,806,000		175,431,524	82,852,000	

1.0 USD= 113.11 円
YGN:Yangon Port

Construction Equipment Packing and Transportation Cost (Singapore→Site)

No.	Item	Specification	Base Price (円)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remark	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (USD)	Port Charge (YGN) (MMK)	Inland Trasport		Document (YNG) (MMK)	Freight (YGN-SNGPL) (USD)	Port Charge (SNGPL) (USD)	Insurance		Packing & Freight (円)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (USD)	Return (USD)	Foreign (USD)	Local (MMK)		Foreign (USD)	Local (MMK)	
1	Portal Crane	60t Lifting							30.00	40ftContainer	3,000	130,500	272000	544,000	130,500			3,000		6,000	1,077,000	12.00	72,000	12,924,000	3-Container x 4 potar cranes
2	Tower Crane	18t-m (4-Nos.)	135,000,000						30.00	40ftContainer	3,000	130,500	272000	544,000	130,500			3,000		6,000	1,077,000		0	0	1-Tower Crane x 10~ Containers
3	Navigation Buoy	Solar Type	4,000,000						30.00	40ftContainer	3,500	130,500	272000	544,000	130,500			3,500		7,000	1,077,000	1.00	7,000	1,077,000	11 Nos, Packing Type:Crate
4	350t Crane Barge	4000t Barge								Towing on Sea										180,000		2.00	360,000		Quotation from Antara
5	275t Crane Barge	3000t Barge								Towing on Sea										180,000		2.00	360,000		
																			Total	379,000	3,231,000		799,000	14,001,000	
																			総Total	379,000	3,231,000			96,853,000	

1.0 USD= 113.11 円
YGN:Yangon port

Site Management Cost_Package1

1 USD = 113.11

No.	Item	Specification	Unit	Unit price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY		Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY
SMC-1	Airfare for Engineer		LS	0.00	0.00	19,774,500	19,774,500	1	0.00	0.00	19,774,500	19,774,500
SMC-2	Airfare for Experts		LS	0.00	0.00	7,112,540	7,112,540	1	0.00	0.00	7,112,540	7,112,540
SMC-3	Overseas Remuneration		LS	0.00	0.00	331,436,000	331,436,000	1	0.00	0.00	331,436,000	331,436,000
SMC-4	Overseas Remuneration	Experts	LS	0.00	0.00	140,313,000	140,313,000	1	0.00	0.00	140,313,000	140,313,000
SMC-5	Allowance	Experts	LS	0.00	0.00	50,512,680	50,512,680	1	0.00	0.00	50,512,680	50,512,680
SMC-6	Allowance	Engineer	LS	0.00	0.00	198,861,600	198,861,600	1	0.00	0.00	198,861,600	198,861,600
SMC-7	Accomodation cost	Engineer	LS	0.00	0.00	143,808,000	143,808,000	1	0.00	0.00	143,808,000	143,808,000
SMC-8	Experts from 3rd country		LS	0.00	231,000	0	26,128,410	1	0.00	231,000.00	0	26,128,410
SMC-9	Airfare from 3rd country	Experts	LS	0.00	0.00	951,000	951,000	1	0.00	0.00	951,000	951,000
SMC-10	Allowance	Experts from 3rd country	LS	0.00	138,600.00	0	15,677,046	1	0.00	138,600.00	0	15,677,046
SMC-11	Accomodation cost	Experts from 3rd country	LS	0.00	0.00	46,458,000	46,458,000	1	0.00	0.00	46,458,000	46,458,000
SMC-12	Accomodation cost	Japanese Experts	LS	0.00	0.00	37,375,200	37,375,200	1	0.00	0.00	37,375,200	37,375,200
SMC-13	Local staff Remuneration		LS	1,273,056,000	0.00	0	105,918,259	1	1,273,056,000	0.00	0	105,918,259
SMC-14	Welfare expense		LS	0.00	0.00	4,182,167	4,182,167	1	0.00	0.00	4,182,167	4,182,167
SMC-15	Office supplies		LS	0.00	0.00	14,786,947	14,786,947	1	0.00	0.00	14,786,947	14,786,947
SMC-16	Communication cost		LS	0.00	0.00	5,526,435	5,526,435	1	0.00	0.00	5,526,435	5,526,435
SMC-17	Social expenses		LS	0.00	0.00	5,327,288	5,327,288	1	0.00	0.00	5,327,288	5,327,288
SMC-18	Car Rental Cost		LS	0.00	0.00	169,461,760	169,461,760	1	0.00	0.00	169,461,760	169,461,760
SMC-19	Cost for Meeting of Defect Inspection		LS	0.00	0.00	2,138,320	2,138,320	1	0.00	0.00	2,138,320	2,138,320
SMC-20	HIV Prevension Program	Without Campaigne	LS	22,858,000.00			1,901,786	1	22,858,000.00			1,901,786
SMC-21	Monitoring equipment setting_Engineer cost		LS	0.00	0.00	765,016	765,016	1	0.00	0.00	765,016	765,016
SMC-22	Environmental monitoring cost	PKG1	LS	0.00	10,000.00	0	1,131,100	1	0.00	10,000.00	0	1,131,100
Total									1,295,914,000	379,600.00	1,178,790,453	1,329,547,053

SMC - 1

Airfare for Engineer

1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員										
所長	2	6.0	往復			470,000			2,820,000	日本-35
主任技術者	3	6.0	往復			240,000			1,440,000	日本-36
橋梁技師(総合)	3	6.0	往復			240,000			1,440,000	日本-36
橋梁技師(鋼橋)	3	6.0	往復			240,000			1,440,000	日本-36
橋梁技師(鋼橋)	4	15.0	往復			240,000			3,600,000	日本-36
橋梁技師(PC橋)	3	4.0	往復			240,000			960,000	日本-36
橋梁技師(PC橋)	4	7.0	往復			240,000			1,680,000	日本-36
橋梁技師(基礎･下部工)	4	9.0	往復			240,000			2,160,000	日本-36
道路技師	4	4.0	往復			240,000			960,000	日本-36
事務･調達	4	12.0	往復			240,000			2,880,000	日本-36
日本国内旅費		75.0	往復			5,260			394,500	日本-33
		1	LS						19,774,500.00	
		1	LS						19,774,500.00	

SMC - 2

Item: Airfare for Experts Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
海外渡航費 技能工										
従業員 日本人技能工										
橋梁特殊工(溶接工)		4.0	往復			240,000			960,000	日本-36
橋梁特殊工(鋼橋架設)		7.0	往復			240,000			1,680,000	日本-36
橋梁特殊工(PC製作)		4.0	往復			240,000			960,000	日本-36
橋梁特殊工(PC架設)		2.0	往復			240,000			480,000	日本-36
橋梁特殊工(基礎工)		6.0	往復			240,000			1,440,000	日本-36
橋梁特殊工(下部工)		3.0	往復			240,000			720,000	日本-36
道路特殊工(軟弱地盤)		3.0	往復			240,000			720,000	日本-36
日本国内旅費		29.0	往復			5,260.00			152,540	日本-33
		1	LS						7,112,540.00	
		1	LS						7,112,540.00	

SMC - 3

Item: Overseas Remuneration Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員 海外報酬	格付									
所長	2	32.0	MM			1,024,000			32,768,000	日本-1
主任技術者	3	32.0	MM			910,000			29,120,000	日本-2
橋梁技師(総合)	3	32.0	MM			910,000			29,120,000	日本-2
橋梁技師(鋼橋)	3	31.0	MM			910,000			28,210,000	日本-2
橋梁技師(鋼橋)	4	87.0	MM			744,000			64,728,000	日本-3
橋梁技師(PC橋)	3	19.0	MM			910,000			17,290,000	日本-2
橋梁技師(PC橋)	4	37.0	MM			744,000			27,528,000	日本-3
橋梁技師(基礎･下部工)	4	54.0	MM			744,000			40,176,000	日本-3
道路技師	4	20.0	MM			744,000			14,880,000	日本-3
事務･調達	4	64.0	MM			744,000			47,616,000	日本-3
		408.0								
Total		1.00	LS						331,436,000	
Unit price		1.00	LS						331,436,000	

SMC － 4

Item: Overseas Remuneration Sourse:

Specification: Experts 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 派遣費										
橋梁特殊工(溶接工)		26.0	MM			789,000			20,514,000	
橋梁特殊工(鋼橋架設)		43.0	MM			783,000			33,669,000	
橋梁特殊工(PC製作)		24.0	MM			783,000			18,792,000	
橋梁特殊工(PC架設)		18.0	MM			783,000			14,094,000	
橋梁特殊工(基礎工)		36.0	MM			783,000			28,188,000	
橋梁特殊工(下部工)		18.0	MM			783,000			14,094,000	
道路特殊工(軟弱地盤)		14.0	MM			783,000			10,962,000	
技能工派遣費ならびに手当て										
日額										
橋梁世話役		29,900	人/日							
橋梁特殊工		26,100	人/日							
運転手(特殊)		21,200	人/日							
海外派遣月額										
橋梁世話役	日額×30	897,000	人/月							
橋梁特殊工	日額×30	783,000	人/月							
運転手(特殊)	日額×30	636,000	人/月							
Total		1.00	LS						140,313,000	
Unit price		1.00	LS						140,313,000	

SMC - 5

Item: Allowance Sourse:

Specification: Experts 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 海外勤務手当て										
橋梁特殊工(溶接工)		26.0	MM			284,040			7,385,040	
橋梁特殊工(鋼橋架設)		43.0	MM			281,880			12,120,840	
橋梁特殊工(PC製作)		24.0	MM			281,880			6,765,120	
橋梁特殊工(PC架設)		18.0	MM			281,880			5,073,840	
橋梁特殊工(基礎工)		36.0	MM			281,880			10,147,680	
橋梁特殊工(下部工)		18.0	MM			281,880			5,073,840	
道路特殊工(軟弱地盤)		14.0	MM			281,880			3,946,320	
技能工海外勤務手当て										
月額										
橋梁世話役		897,000	人/月							
橋梁特殊工		783,000	人/月							
溶接工		789,000	人/月							
海外勤務手当て										
橋梁世話役	月額×0.6*0.6	322,920	人/月							
橋梁特殊工	月額×0.6*0.6	281,880	人/月							
溶接工	月額×0.6*0.6	284,040	人/月							
Total		1.00	LS						50,512,680	
Unit price		1.00	LS						50,512,680	

SMC - 6

Item: Allowance Sourse:

Specification: Engineer 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員海外手当										
所長	2	32.0	人/月			614,400			19,660,800.00	
主任技術者	3	32.0	人/月			546,000			17,472,000.00	
橋梁技師(総合)	3	32.0	人/月			546,000			17,472,000.00	
橋梁技師(鋼橋)	3	31.0	人/月			546,000			16,926,000.00	
橋梁技師(鋼橋)	4	87.0	人/月			446,400			38,836,800.00	
橋梁技師(PC橋)	3	19.0	人/月			546,000			10,374,000.00	
橋梁技師(PC橋)	4	37.0	人/月			446,400			16,516,800.00	
橋梁技師(基礎･下部工)	4	54.00	人/月			446,400			24,105,600.00	
道路技師	4	20.00	人/月			446,400			8,928,000.00	
事務･調達	4	64.0	人/月			446,400			28,569,600.00	
Total		1.00	LS	0.00			0.00		198,861,600	
Unit price		1.00	LS	0.00			0.00		198,861,600	

SMC - 7

Item: Accomodation cost Sourse:

Specification: Engineer 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員 宿泊手当										
所長	2	32.0	人/月			405,000			12,960,000	日本-22
主任技術者	3	32.0	人/月			348,000			11,136,000	日本-23
橋梁技師(総合)	3	32.0	人/月			348,000			11,136,000	日本-23
橋梁技師(鋼橋)	3	31.0	人/月			348,000			10,788,000	日本-23
橋梁技師(鋼橋)	4	87.0	人/月			348,000			30,276,000	日本-24
橋梁技師(PC橋)	3	19.0	人/月			348,000			6,612,000	日本-23
橋梁技師(PC橋)	4	37.0	人/月			348,000			12,876,000	日本-24
橋梁技師(基礎･下部工)	4	54.00	人/月			348,000			18,792,000	日本-24
道路技師	4	20.00	人/月			348,000			6,960,000	日本-24
事務･調達	4	64.0	人/月			348,000			22,272,000	日本-24
Total		1.00	LS						143,808,000	
Unit price		1.00	LS						143,808,000	

SMC - 8

Item: Experts from 3rd country Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国からの技能工、派遣費										
安全担当事務	ベトナム	32.0	人/月		(1000)			32,000		
上級土木技術者(鋼橋)	ベトナム	31.0	人/月		(1000)			31,000		
上級土木技術者(PC)	ベトナム	30.0	人/月		(1000)			30,000		
上級土木技術者(基礎工)	ベトナム	30.0	人/月		(1000)			30,000		
土木技術者(鋼橋)	ベトナム	30.0	人/月		(600)			18,000		
土木技術者(鋼橋)	ベトナム	30.0	人/月		(600)			18,000		
土木技術者(PC)	ベトナム	30.0	人/月		(600)			18,000		
土木技術者(PC)	ベトナム	30.0	人/月		(600)			18,000		
土木技術者(基礎・下部工)	ベトナム	30.0	人/月		(600)			18,000		
土木技術者(基礎・下部工)	ベトナム	30.0	人/月		(600)			18,000		
Total		1.00	LS					231,000.00	26,128,410	
Unit price		1.00	LS						26,128,410	

SMC - 9

Item: Airfare from 3rd country Sourse:

Specification: Experts 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
海外渡航費 第3国技能工										
安全担当事務	ハノイーヤンゴン	3.0	往復			31,700			95,100	
上級土木技術者(鋼橋)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
上級土木技術者(PC)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
上級土木技術者(基礎工)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(鋼橋)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(鋼橋)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(PC)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(PC)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(基礎・下部工)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(基礎・下部工)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
									0	
ベトナム航空ハノイーヤンゴン往復	31,700									
Total		1.00	LS				0.00		951,000	
Unit price		1.00	LS				0.00		951,000	

SMC - 10

Item: Allowance Sourse:

Specification: Experts from 3rd country 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国技能工、海外手当										
安全担当事務	月額報酬の60%	32.0	人/月		600			19,200	0	
上級土木技術者(鋼橋)	月額報酬の60%	31.0	人/月		600			18,600	0	
上級土木技術者(PC)	月額報酬の60%	30.0	人/月		600			18,000	0	3級相当･現地日額
上級土木技術者(基礎工)	月額報酬の60%	30.0	人/月		600			18,000	0	
土木技術者(鋼橋)	月額報酬の60%	30.0	人/月		360			10,800	0	
土木技術者(鋼橋)	月額報酬の60%	30.0	人/月		360			10,800	0	
土木技術者(PC)	月額報酬の60%	30.0	人/月		360			10,800	0	
土木技術者(PC)	月額報酬の60%	30.0	人/月		360			10,800	0	
土木技術者(基礎･下部工)	月額報酬の60%	30.0	人/月		360			10,800	0	
土木技術者(基礎･下部工)	月額報酬の60%	30.0	人/月		360			10,800	0	
Total		1.00	LS					138,600		
Unit price		1.00	LS							

SMC - 11

Item: Accomodation cost Sourse:

Specification: Experts from 3rd country 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国技能工、宿泊手当										
安全担当事務	JICA規定4級の40%	32.0	人/月			174,000			5,568,000	
上級土木技術者(鋼橋)	JICA規定4級の40%	31.0	人/月			174000			5,394,000	
上級土木技術者(PC)	JICA規定4級の40%	30.0	人/月			174,000			5,220,000	3級相当･現地日額
上級土木技術者(基礎工)	JICA規定4級の40%	30.0	人/月			174,000			5,220,000	
土木技術者(鋼橋)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
土木技術者(鋼橋)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
土木技術者(PC)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
土木技術者(PC)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
土木技術者(基礎･下部工)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
土木技術者(基礎･下部工)	JICA規定4級の40%	30.0	人/月			139,200			4,176,000	
		303.0								
JICA規定4級の宿泊費/日	11600									
JICA規定4級の40%x30日	139200									
JICA規定4級の50%x30日	174000									
Total		1.00	LS				0.00		46,458,000	
Unit price		1.00	LS				0.00		46,458,000	

SMC - 12

Item: Accomodation cost Sourse:

Specification: Japanese Experts 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 宿泊手当て										
橋梁特殊工(溶接工)	JICA規定4級の60%	26.0	MM			208,800			5,428,800	
橋梁特殊工(鋼橋架設)	JICA規定4級の60%	43.0	MM			208,800			8,978,400	
橋梁特殊工(PC製作)	JICA規定4級の60%	24.0	MM			208,800			5,011,200	
橋梁特殊工(PC架設)	JICA規定4級の60%	18.0	MM			208,800			3,758,400	
橋梁特殊工(基礎工)	JICA規定4級の60%	36.0	MM			208,800			7,516,800	
橋梁特殊工(下部工)	JICA規定4級の60%	18.0	MM			208,800			3,758,400	
道路特殊工(軟弱地盤)	JICA規定4級の60%	14.0	MM			208,800			2,923,200	
JICA規定4級の宿泊費	11600									
JICA規定4級の60%x30日	208800									
Total		1.00	LS				0.00		37,375,200	
Unit price		1.00	LS				0.00		37,375,200	

SMC - 13

Item: Local staff Remuneration Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
現地人技術者、雇用費										
上級事務員		32.0	MM	2,028,000			64,896,000			
調達・事務員		56.0	MM	743,000			41,608,000			
上級土木技術者(設計)		32.0	MM	2,028,000			64,896,000			
土木技術者(設計)		65.0	MM	1,550,000			100,750,000			
土木技術者(鋼橋施工計画)		26.0	MM	1,550,000			40,300,000			
土木技術者(PC橋施工鋼計画)		18.0	MM	1,550,000			27,900,000			
土木技術者(下部工施工計画)		18.0	MM	1,550,000			27,900,000			
土木技術者(鋼橋製作)		43.0	MM	1,550,000			66,650,000			
土木技術者(鋼橋架設)		69.0	MM	1,550,000			106,950,000			
土木技術者(PC箱桁製作)		54.0	MM	1,550,000			83,700,000			
土木技術者(PC箱桁架設)		27.0	MM	1,550,000			41,850,000			
土木技術者(基礎工)		54.0	MM	1,550,000			83,700,000			
土木技術者(下部工)		36.0	MM	1,550,000			55,800,000			
土木技術者(道路・軟弱地盤)		55.0	MM	1,550,000			85,250,000			
土木技術者(試験室)		82.0	MM	1,090,000			89,380,000			
土木技術者(試験室Ope..)		52.0	MM	520,000			27,040,000			
CAD オペレーター		372	MM	546,000			203,112,000			Cost for Pay Item 01150-01
警備員		93	MM	266,000			24,738,000			
事務連絡係		62.0	MM	338,000			20,956,000			
秘書		32.0	MM	490,000			15,680,000			
Total		1,278.0								
		1,581.0								
Total		1.00	LS				1,273,056,000		105,918,259	0 (事務員、オフィスボーイ、運転手除く)
Unit price		1.00	LS				1,273,056,000		105,918,259	

SMC - 14

Item: Welfare expense Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Welfare expense										
Welfare expense		1.0	LS			4,182,167			4,182,167	
Welfare expense(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				497,877,000						
B: 福利厚生相当率(%)= 12750/A + 0.82 =12750/598487 + 0.82 =		0.84								
ただし、A **<1500万円の場合は、1.67%とする。**										
Total		1.00	LS				0.00		4,182,167	
Unit price		1.00	LS				0.00		4,182,167	

SMC - 15

Item: Office supplies Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Office supplies										
Office supplies		1.0	LS			14,786,947			14,786,947	3級相当･現地日額
Office supplies(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				497,877,000						
B: 福利厚生相当率(%)= 30134/A + 2.92 =30134/598487 + 2.92 =		2.97								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	LS				0.00		14,786,947	
Unit price		1.00	LS				0.00		14,786,947	

SMC - 16

Item: Communication cost Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Communication cost										
Communication cost		1.0	LS			5,526,435			5,526,435	3級相当･現地日額
Communication cost(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				497,877,000						
B: 福利厚生相当率(%)= 21199/A + 1.076 =21199/598487 + 1.076 =		1.11								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	LS				0.00		5,526,435	
Unit price		1.00	LS				0.00		5,526,435	

SMC - 17

Item: Social expenses Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Social expenses										
Social expenses		1.0	LS			5,327,288			5,327,288	3級相当･現地日額
Communication cost(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				497,877,410						
B: 福利厚生相当率(%)= 28244/A + 1.017 =28244/598487 + 1.017 =		1.07								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	LS				0.00		5,327,288	
Unit price		1.00	LS				0.00		5,327,288	

SMC - 18

Item: Car Rental Cost Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Car rental										
Alphard		96.0	car/M	1,800,000		149,760			14,376,960	
Parado		528.0	car/M	2,500,000		208,000			109,824,000	
Parado		160.0	car/M	2,500,000		208,000			33,280,000	
Hi-Lux		0.0	car/M							
Pro-Box		160.0	car/M	900,000		74,880			11,980,800	
Total		1.00	LS				0.00		169,461,760	
Unit price		1.00	LS				0.00		169,461,760	

SMC - 19

Item: Cost for Meeting of Defect Inspection Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
瑕疵検査立会費用										
1)従業員海外報酬										
所長	2級	0.5	月・人			1,024,000			512,000	3級相当・現地日額
主任技師	3級	0.5	月・人			910,000			455,000	
計									967,000	
2)海外渡航費、従業員										
所長	2級	1.0	往復			470,000			470,000	
主任技師	3級	1.0	往復			240,000			240,000	
計									710,000	
3)国内旅費										
所長/主任技師		2.0	往復			5,260			10,520	
4)海外手当、従業員										
所長	2級	15.00	人・日			4,500			67,500	
主任技師	3級	15.0	人・日			3,800			57,000	
計									124,500	
5)海外宿泊費、従業員										
所長	2級	13.0	人・日			13,500			175,500	
主任技師	3級	13.0	人・日			11,600			150,800	
計									326,300	
Total		1.00	LS				0.00		2,138,320	
Unit price		1.00	LS				0.00		2,138,320	

SMC - 20

Item: HIV Prevension Program Sourse:

Specification: Without Campaigne 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
HIV Prevension Program										
Awareness and Education for Prevension Program		1.0	LS	12,748,000			12,748,000			
HIV Testing for 700 workers		1.0	LS	5,600,000			5,600,000			
Peer Education Training		1.0	LS	4,510,000			4,510,000			
Total		1.00	LS	22,858,000			22,858,000.00			
Unit price		1.00	LS				22,858,000.00			

SMC - 21

Item: Monitoring equipment setting_Engineer cost Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Engineer cost_Quatation		1.00	LS			765,016	0	0	765,016	
*including allowance, residence fee, transportation fee										
Total		1.00	LS	0			0.00		765,016	
Unit price		1.00	LS				0.00		765,016	

SMC - 22

Item: Environmental monitoring cost Sourse:

Specification: PKG1 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Total cost		4.00	times		2,500.00		0	10,000	0	
Total		1.00	LS	0			0.00	10,000.00	0.00	
Unit price		1.00	LS				0.00	10,000.00	0.00	

OHC - 1

Item: Overhead cost　　Sourse:

Specification: PKG2　　1 式

Item	Specification	Quantity	Unit	Unit price			Amount			備考
				Local (MMK)	米ドル (USD)	Main (JPY)	Local (MMK)	米ドル (USD)	Main (JPY)	
対象額　工事原価＝直接工事費＋共通仮設費＋現場管理費										
直接工事費 （円）	9,336,598,617									
共通仮設費 （円）	868,405,469									
現場管理費 （円）	1,113,338,729									
Total(工事原価) （円）	11,318,342,816									
一般管理費率　H28国土　P65より、工事原価が30億円以上のため、以下の一般管理費等率算定式により算出された率を使用する										
	Gp:一般管理費等率(%)									
	Gp=	7.41%								
一般管理費	工事原価×一般管理費等率	1	式			838,689,203			838,689,203	
Total		1	式						838,689,203	
Unit price		1	式						838,689,203	

General Temporary Works_List_Package2

No.	項目	Specification	Unit	Unit price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY		Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY
GTW-1	Rate Calculation	GTP_PKG1	LS			186,731,972.00	186,731,972	1	0	0	186,731,972	186,731,972
GTW-2	Material shipping cost	Yokohama or Vietnam-Yangon	LS	10,753,800	2,387,730	36,123,394	307,094,251	1	10,753,800	2,387,730	36,123,394	307,094,251
GTW-3	Machinery shipping cost	Yokohama or Singapole-Yangon	LS	75,313,000	79,000.00	61,312,000	76,513,732	1	75,313,000	79,000	61,312,000	76,513,732
GTW-4	Assembly & Disassembly	Machinery	LS			4,831,260	4,831,260	1	0	0	4,831,260	4,831,260
GTW-14	Safety Related Cost for Navigation	Guard Boat, Buoy	LS	321,720,000			26,767,104	1	321,720,000	0	0	26,767,104
GTW-15	Safety Related Cost for Traffic	Guardman/Traffic signboard	LS	5,536,000			460,595	1	5,536,000	0	0	460,595
GTW-16	Safety Related Cost for Traffic	Temporary fence	LS	21,912,800			1,823,145	1	21,912,800	0	0	1,823,145
GTW-17	Site administration cost	Electricity/Water well	LS	84,850,000	15,000.00		8,756,170	1	84,850,000	15,000	0	8,756,170
GTW-18	Quality control test	0	LS	146,216,500		23,166,000	35,331,213	1	146,216,500	0	23,166,000	35,331,213
GTW-19	Site expense	Installation/Remove, Maintenance	LS	10,610,000.00			882,752	1	10,610,000	0	0	882,752
GTW-20	Equipment for General Use	PKG2	LS	2,632,344,951.92	0.00	0.00	219,011,100	1	2,632,344,952	0	0	219,011,100
GTW-21	Others	Project information board	LS	2,430,000.00			202,176	1	2,430,000	0	0	202,176
Total									3,311,687,052	2,481,730	312,164,626	868,405,469

GTW - 1

Item: Rate Calculation　　Sourse: H28国土P<33>

Specification: GTP_PKG1　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
共通仮設費　率計算による部分										
共通仮設費(率計算)	対象額×(Kr＋補正係数)	1	LS			186,731,972			186,731,972	
対象額	9,336,598,617									
直接工事費	9,336,598,617									
支給品費＋無償貸付機械等評価額	0									
事業損失防止施設費	0									
準備費に含まれる処分費	0									
共通仮設比率 (①＋②)	2.00									
①共通仮設比率 Kr										
鋼橋工事	2									
②補正係数										
大都市を考慮した補正　(対象外)	-									
施工地域･工事場所 (地方･一般交通の影響あり)										
Total		1	LS						186,731,972	
Unit price		1	LS				0.00		186,731,972	

GTW - 2

Item: Material shipping cost Sourse:

Specification: Yokohama or Vietnam-Yangon 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
建設資材輸送費										
Yokohama - Yangon										
建設資材 片道	別途算定表より	1.00	LS	6,051,700		36,123,394.14	6,051,700.00		36,123,394.14	
Vietnam ー Yangon										
建設資材 片道	別途算定表より	1.00	LS	4,702,100.00	2,387,730.00		4,702,100.00	2,387,730.00		
Total		1	LS				10,753,800.00	2,387,730	36,123,394	
Unit price		1	LS				10,753,800.00	2,387,730	36,123,394	

GTW - 3

Item: Machinery shipping cost Sourse:

Specification: Yokohama or Singapole-Yangon 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
建設機材輸送梱包費 往復										
Yokohama - Yangon										
建設資材 往復	別途算定表より	1.00	LS	61,312,000		126,756,238	61,312,000		126,756,238	
Singapole ー Yangon										
建設資材 往復	別途算定表より	1.00	LS	14,001,000	79,000		14,001,000	79,000		
Total		1	LS				75,313,000.00	79,000.00	126,756,237.79	
Unit price		1	LS				75,313,000.00	79,000.00	126,756,237.79	

GTW - 4

Item: Assembly & Disassembly　　Sourse: JICAｶﾞｲﾄﾞﾗｲﾝ 68

Specification: Machinery　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
運搬費 分解･組立										
重機械分解･組み立て										
深層混合処理機	2軸 三点LSくい打ち機									
特殊作業員		41.20	人日			48,500			1,998,200	
トラッククレーン運転単価	25t吊	6.30	台日			48,000			302,400	
諸雑費	5%	1.00	LS						115,030	
									2,415,630	
Total		1.00	LS						4,831,260.00	
Unit price		1.00	LS				0.00		4,831,260.00	

GTW - 14

Item: Safety Related Cost for Navigation Sourse: JICAガイドライン 68

Specification: Guard Boat, Buoy 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 航路安全対策										
工事警戒船										
曳舟	300PS, 25t	28	月	4,500,000			126,000,000			
スピードボート	4 sheet	2	No.	840,000			1,680,000			70%償却
船員										
曳舟 高級船員	2-シフト制	56.00	人月	1,125,000			63,000,000			
船員	2-シフト制	56.00	人月	607,500			34,020,000			
スピードボート 高級船員	2-シフト制	56.00	人月	1,125,000			63,000,000			
船員	2-シフト制	56.00	人月	607,500			34,020,000			
Navigation Buoy		16.00	No.		3,000.00			48,000.00		
Instalation of Buoy		16.00	No.		600.00			9,600.00		
Total		1.00	LS				321,720,000.00	57,600.00		
Unit price		1.00	LS				321,720,000.00	57,600.00		

GTW - 15

Item: Safety Related Cost for Traffic　　Sourse: JICAｶﾞｲﾄﾞﾗｲﾝ 68

Specification: Guardman/Traffic signboard　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 安全施設類										
Traffic Manager		16	MM	49,000			784,000			橋梁世話役相当
Traffic Watchman		16	MM	297,000			4,752,000			
Temporary Barricade-TB-1	Chain/poles	0	Nos	50,000			0			
Traffic Signboard:Guide	Myanmer Standard	0	Nos	50,000			0			
Traffic Signboard:Causion	Myanmer Standard	0	Nos	50,000			0			
Total		1.00	LS				5,536,000.00			
Unit price		1.00	LS				5,536,000.00			

GTW - 16

Item: Safety Related Cost for Traffic　　Sourse: JICAｶﾞｲﾄﾞﾗｲﾝ 68

Specification: Temporary fence　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
安全費 ヤード安全施設類										
Security Fence-SF-1:H>2.0m	Wire net / Iron sheet	345	m	8,000			2,760,000			Construction Yard Toolgate
Security Fence-SF-2:H>2.0m	Wire net / Iron sheet	180	m	8,000			1,440,000			Access Road,Existing Road
Sub-total		525					4,200,000.0			
Board Fence-BF-1:H>2.4m	Iron sheet/board	151	m	43,500			6,568,500			Bago Brodge RightSide
Board Fence-BF-2:H>2.4m	Iron sheet/board	157	m	43,500			6,829,500			Bago Bridge Left Side
Sub-total										
Entrance Gate :H>2.4m		1.00	箇所	114,800			114,800			
Total		1.00	LS				21,912,800			
Unit price		1.00	LS				21,912,800			

GTW - 17

Item: Site administration cost　　Sourse: JICAｶﾞｲﾄﾞﾗｲﾝ 68

Specification: Electricity/Water well　　1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
電力･用水使用料										
工事事務所										
電気料金	初期料金	1.00	LS	500,000			500,000			
電気料金	基本料金	28	月	1,250,000			35,000,000			
発動発電機	300kva	1.00	個		15,000			(15,000.00)		50%償却
オイル代		28	月	1,200,000			33,600,000.00			月150h使用
井戸による水道設備										
井戸掘削費及び井戸設備	3インチ径、100m深	2.00	LS	7,875,000			15,750,000.00			
Total		1.00	LS				84,850,000.00	15,000.00		
Unit price		1.00	LS				84,850,000.00	15,000.00		

GTW - 18

Item: Quality control test Sourse:

Specification: 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
載荷試験										
衝撃載荷試験、鋼管杭	φ1.2m	9	箇所			2,574,000			23,166,000.00	IHC－S200
静的載荷試験、場所打杭	φ1.5m	1	箇所	57,886,500			(57,886,500)			
Koden Test		50	個	358,600			(17,930,000)			
Sonic Test		50	個	1,408,000			(70,400,000)			
Total		1.00	LS				146,216,500		23,166,000	
Unit price		1.00	LS				146,216,500		23,166,000	

GTW - 19

Item: Site expense Sourse:

Specification: Installation/Remove, Maintenance 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
営繕費										
コンサルタント現場詰所設営･撤去										
設営･撤去	平均3.0名×10m2=30m2	30.0	m2	300,000			9,000,000			
コンサルタント事務所備品										
机		3.0	台	65,000			195,000			損料率 44%
椅子		3.0	脚	45,000			135,000			損料率 44%
ソファーセット		1.0	LS	200,000			200,000			損料率 44%
本棚		1.0	個	130,000			130,000			損料率 44%
エアコン		1.0	台	600,000			600,000			損料率 48%
冷蔵庫		1.0	台	350,000			350,000			損料率 48%
		1	LS				10,610,000.00	#REF!	0.00	
		1	LS				10,610,000.00			

GTW - 20

Item: Equipment for General Use Sourse:

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Crawler crane	200t hang	330.00	days	3,433,534	0	0	1,133,066,106	0	0	Mac-d(14)
*According to Equipment shedule, 11 months * 30 days = 330 days										
Barge	300t	840.00	days	727,825	0	0	611,372,596	0	0	Mac-d(22)
*According to Equipment shedule, 28 months * 30 days = 840 days										
Tag boat	1000PS_90GT	840.00	days	1,057,031	0	0	887,906,250	0	0	Mac-d(39)
*According to Equipment shedule, 28 months * 30 days = 840 days										
Total		1	LS				2,632,344,952			
Unit price		1	LS				2,632,344,952	0	0	

GTW - 21

Item: Others Sourse:

Specification: Project information board 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
工事案内板										
工事案内板(大)	1.8m x 3.6m, 支柱付	2.00	枚	675,000			1,350,000			
工事案内板(小)	0.9m x 1.8m, 支柱付	4.00	枚	270,000			1,080,000			
Total		1.00	LS				2,430,000.00			
Unit price		1.00	LS				2,430,000.00			

General Temporary Works Packing and Shipping Cost Calculation Table (TYO:YOKOHAMA→RGN)

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing Type	Packing Fee (Reference to JICA Manual)	Yokohama Port Charges(Yen)					Ocean Freight (YKHM-YNG) (Yen)	Loading Fee (YNG) (MMK)	Yangon Inland Tran. (YNG-Site) (MMK)		Document (YNG) (MMK)	Ocean Fraight (YNG-YKHM) (Yen)	Loading Fee (YKHM Port) (Yen)	Insurance (Yokohama-Site)		Total of Packing and Transportation Fee (Yen)		Nos.	Total of Packing and Transportation Fee (Yen)		Remarks
													Custom Clearance	Loading Fee	Documen-tation	Application for Export	Total			One Way (MMK)	Return Trip (MMK)				One Way (Yen)	Round Trip (Yen)	Yen Portion (Yen)	LocalPortion (MMK)		Yen Portion (Yen)	LocalPortion(MMK)	
1	PC cable	PC Strand	29,000,000	188.00					24.00	20ft container	Crate	228,060	5,900	96,000	20,000	30,000	151,900	215,000	130,500	231,200		0	0	0	395,332	0	990,292	345,500	10.00	9,902,918	345,500	For PC Box
2	Ancinary Material	Sheath Pipe	1,750,000	6.00					30.00	40ft container	Crate	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	231,200		0	0	0	259,773	0	926,748	345,500	3.00	2,780,245	345,500	For PC Box
3	Ancinary Material	Anchor and Others	30,000,000	25.00					30.00	40ft container	Case	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	231,200		0	0	0	400,306	0	1,067,281	345,500	3.00	3,201,844	345,500	For PC Box
4	Expansion Joint	Metal Steel	15,358,750	14.00					30.00	40ft container	Crate	276,075	5,900	120,000	20,000	30,000	175,900	215,000	130,500	231,200		0	0	0	327,472	0	994,447	345,500	8.00	7,955,574	345,500	For Steel Box and PC Box Girder
5	Pavement	Modified Asphalt	5,000,000	30.00					30.00	40ft container	Palette	143,775	5,900	120,000	20,000	30,000	175,900	215,000	130,500	231,200		0	0	0	275,941	0	810,616	345,500	2.00	1,621,232	345,500	For Steel Slab Aspalt
6	Pavement	Waterproof Material	50,000,000	10.00					30.00	40ft container	Palette	155,925	5,900	120,000	20,000	30,000	175,900	215,000	130,500	272000		0	0	0	522,756	0	1,069,581	345,500	1.00	1,069,581	345,500	For Steel Slab Aspalt
9	Reinforcement bar		173,313,724	2948.83					2,949	On Barge	on barge	7,961,838	5,900	11,795,316	20,000	30,000	11,851,216	43,360,466	130,500	1337024		0	0	0	862,171	0	64,035,691	43,490,966	1.00	64,035,691	43,490,966	*on Unit rate Reinforcement bar
																													Sub-total	26,531,394	2,073,000	*Except for 9

1.0 USD= 113.11
YGN:ヤンゴン港

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (Yen)	Port Charge (YGN) (MMK)	Inland Trasport		Document (YNG) (USD)	Hreight (YGN-Yokohama) (Yen)	Port Charge (YKHM) (Yen)	Insurance		Packing & Freight (FS)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (Yen)	Return (Yen)	Foreign (Yen)	Local (MMK)		Foreign (Yen)	Local (MMK)	
1	Stud fof SPSP	Connector Between SPSP and Pile Cap	32,894,000							20ft container	872,000	130,500	231,200	0	0	0	0	0	0	872,000	361,700	11	9,592,000	3,978,700	
																						Sub-total	9,592,000	3,978,700	
																						Total	36,123,394	6,051,700	

General Temporary Works Packing and Shipping Cost Calculation Table (VN→RGN)

No.	Item	Specification	Basic Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remarks	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (Yen)	Port Charge (YGN) (MMK)	Inland Trasport		Document (YNG) (USD)	Hreight (YGN-Yokohama) (USD)	Port Charge (VTN) (USD)	Insurance		Packing & Freight (FS)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (USD)	Return (USD)	Foreign (USD)	Local (MMK)		Foreign (USD)	Local (MMK)	
1	Bearing for PC box Girder	Elastomeric Bearing for A1 to P5	8,457,000								3,000	130,500	231,200	0.00	0	0	0	0	0	3,000	361,700	5	15,000	1,808,500	
2	Bearing for Steel box Girder	Elastomeric Bearing	9,541,667								4,000	130,500	231,200	0	0	0	0	0	0	4,000	361,700	6	24,000	2,170,200	
3	Steel Pipe	φ1,200mm for SPSP	7,942,000								1,174,365	130,500	231,200	0	0	0	0	0	0	1,174,365	361,700	2	2,348,730	723,400	Including Accessory
																						合 計	2,387,730	4,702,100	

Construction Equipment Packing and Transportation Cost (Yokohama→Site)

No.	Item	Specification	Base Price (Yen)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Referece	Packing Type	Packing Fee (Reference to JICA Manual)	Yokohama Port Charges(Yen)					Ocean Freight (YKHM-YNG) (Yen)	Loading Fee (YNG) (MMK)	Yangon Inland Tran. (YNG-Site) (MMK)		Document (YNG) (MMK)	Ocean Fraight (YNG-YKHM) (Yen)	Loading Fee (YKHM Port) (Yen)	Insurance (Yokohama-Site)		Total of Packing and Transportation Fee (Yen)		Nos.	Total of Packing and Transportation Fee (Yen)		Remarks
													Custom Clearance	Loading Fee	Documen-tation	Application for Export	Total			One Way (MMK)	Return Trip (MMK)				One Way (Yen)	Round Trip (Yen)	Yen Portion (Yen)	LocalPortion (MMK)		Yen Portion (Yen)	LocalPortion (MMK)	
1	SBS Erection Girder	H-Beam, ChannelAangle	9,640,000	21.79					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	354,053	708,106	2,058,181	805,000	28.00	57,629,078	22,540,000	
2	SBS Erection Girder	Main Hoist, Jack and Moving Equip.	17,900,000	12.50					30.00	40ftContainer	Crate	276,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	395,144	790,287	2,046,087	1,077,000	4.00	8,184,349	4,308,000	
3	SBS Erection Girder	Ancillary Equipment	35,400,000	24.00					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	482,199	964,399	2,220,199	1,077,000	1.00	2,220,199	1,077,000	
4	SBS Erection Girder	OilHydraulic Set	80,000,000	20.00					30.00	40ftContainer	Case	312,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	704,068	1,408,135	2,663,935	1,077,000	1.00	2,663,935	1,077,000	
5	Deep Soil Mixing	Soil Mixing Machine (For 2 machines)	43,500,000	26.25					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	522,494	1,044,988	2,300,788	1,077,000	8.00	18,406,303	8,616,000	
6	Deep Soil Mixing	Cement Mixing Plant For(2 Sets)	39,200,000	17.00					30.00	40ftContainer	Bundle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	501,103	1,002,206	2,258,006	1,077,000	2.00	4,516,012	2,154,000	
7	Driving SPSP	Hydraulic Hammer 200kNm	135,000,000	21.10					30.00	40ftContainer	Crate	276,075.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	977,672	1,955,344	3,211,144	1,077,000	2.00	6,422,288	2,154,000	
8	Driving SPSP	Power Pack for above, 750kw	30,000,000	11.20					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	455,337	910,673	2,166,473	1,077,000	1.00	2,166,473	1,077,000	
9	Driving SPSP	Vibration Hamme r240kw	68,000,000	10.20					24.00	20ftContainer	Crate	304,080.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	644,372	1,288,745	2,544,545	1,077,000	1.00	2,544,545	1,077,000	
10	Short Line Matching Equipment	Hydraulic equipment (For 3 sets)	42,000,000	16.50					30.00	40ftContainer	Case	380,100.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	208,934	417,868	1,673,668	1,077,000	1.00	1,673,668	1,077,000	For 3 sets of Equipment
11	Short Line Matching Equipment	Frame and Form (For 3 sets)	10,000,000	24.75					30.00	40ftContainer	Bandle	94,275.00	5,900	300,000	20,000	30,000	355,900	272,000	130,500	272000	544,000	130,500	272,000	355,900	49,746	99,492	1,355,292	1,077,000	15.00	20,329,387	16,155,000	For 3 sets of Equipment
																									合 計		24,498,320	11,575,000		126,756,238	61,312,000	

1.0 USD= 113.11 円
YGN:Yangon Port

Construction Equipment Packing and Transportation Cost (Singapore→Site)

No.	Item	Specification	Base Price (円)	Weight (t)	Length (m)	Width (m)	Height (m)	Cubic (m3)	F/T	Remark	Packing, Documentation to export, Freight of Container from Yokohama to Yangon (USD)	Port Charge (YGN) (MMK)	Inland Trasport		Document (YNG) (MMK)	Freight (YGN-SNGPL) (USD)	Port Charge (SNGPL) (USD)	Insurance		Packing & Freight (円)		NOS	Total Packing&Freight		REMARK
													Cost (MMK)	Return (MMK)				One way (USD)	Return (USD)	Foreign (USD)	Local (MMK)		Foreign (USD)	Local (MMK)	
1	Portal Crane	60t Lifting	212,000,000						30.00	40ftContainer	3,000	130,500	272000	544,000	130,500	3,000				6,000	1,077,000	12.00	72,000	12,924,000	3-Container x 4 potar cranes
2	Tower Crane	18t-m (4-Nos.)	135,000,000						30.00	40ftContainer	3,000	130,500	272000	544,000	130,500	3,000				6,000	1,077,000		0	0	1-Tower Crane x 10˝ Containers
3	Navigation Buoy	Solar Type	6,000,000						30.00	40ftContainer	3,500	130,500	272000	544,000	130,500	3,500				7,000	1,077,000	1.00	7,000	1,077,000	For 18 Navigation Buoys
																			Total	19,000	3,231,000		79,000	14,001,000	
																			総Total	19,000	3,231,000			75,313,000	

1.0 USD= 113.11 円
YGN:Yangon port

Site Management Cost_Package2

1 USD = 113.11

No.	Item	Specification	Unit	Unit price				Quantity	Amount			
				Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY		Local (MMK)	Foreign (USD)	Main (JPY)	Conv. to JPY
SMC-1	Airfare for Engineer		LS			17,321,900	17,321,900	1	0.00	0.00	17,321,900	17,321,900
SMC-2	Airfare for Experts		LS	0.00	0.00	6,376,760	6,376,760	1	0.00	0.00	6,376,760	6,376,760
SMC-3	Overseas Remuneration		LS	0.00	0.00	277,444,000	277,444,000	1	0.00	0.00	277,444,000	277,444,000
SMC-4	Overseas Remuneration	Experts	LS	0.00	0.00	106,353,000	106,353,000	1	0.00	0.00	106,353,000	106,353,000
SMC-5	Allowance	Experts	LS	0.00	0.00	38,357,280	38,357,280	1	0.00	0.00	38,357,280	38,357,280
SMC-6	Allowance	Engineer	LS	0.00	0.00	166,466,400	166,466,400	1	0.00	0.00	166,466,400	166,466,400
SMC-7	Accomodation cost	Engineer	LS	0.00	0.00	119,796,000	119,796,000	1	0.00	0.00	119,796,000	119,796,000
SMC-8	Experts from 3rd country		LS	0.00	173,000	0	19,568,030	1	0.00	173,000.00	0	19,568,030
SMC-9	Airfare from 3rd country	Experts	LS	0.00	0.00	1,299,700	1,299,700	1	0.00	0.00	1,299,700	1,299,700
SMC-10	Allowance	Experts from 3rd country	LS	0.00	103,800	0	11,740,818	1	0.00	103,800.00	0	11,740,818
SMC-11	Accomodation cost	Experts from 3rd country	LS	0.00	0.00	33,582,000	33,582,000	1	0.00	0.00	33,582,000	33,582,000
SMC-12	Accomodation cost	Japanese Experts	LS	0.00	0.00	28,396,800	28,396,800	1	0.00	0.00	28,396,800	28,396,800
SMC-13	Local staff Remuneration		LS	991,972,000	0.00	0	82,532,070	1	991,972,000	0.00	0	82,532,070
SMC-14	Welfare expense		LS	0.00	0.00	4,038,628	4,038,628	1	0.00	0.00	4,038,628	4,038,628
SMC-15	Office supplies		LS	0.00	0.00	14,279,433	14,279,433	1	0.00	0.00	14,279,433	14,279,433
SMC-16	Communication cost		LS	0.00	0.00	5,336,758	5,336,758	1	0.00	0.00	5,336,758	5,336,758
SMC-17	Social expenses		LS	0.00	0.00	5,144,443	5,144,443	1	0.00	0.00	5,144,443	5,144,443
SMC-18	Car Rental Cost		LS	0.00	0.00	169,461,760	169,461,760	1	0.00	0.00	169,461,760	169,461,760
SMC-19	Cost for Meeting of Defect Inspection		LS	0.00	0.00	2,138,320	2,138,320	1	0.00	0.00	2,138,320	2,138,320
SMC-20	HIV/AIDS Prevension Plan	Without Campaign	LS	19,378,000	0.00	0.00	1,612,200	1	19,378,000	0.00	0.00	1,612,250
SMC-21	Monitoring equipment setting_Engineer cost		LS	0	0.00	327,864.00	327,864	1	0	0.00	327,864	327,864
SMC-22	Environmental monitoring cost	PKG2	LS	0	15,600	0	1,764,516	1	0	15,600	0	1,764,516
Total									1,011,350,000	292,400.00	996,121,045	1,113,338,729

SMC - 1

Airfare for Engineer

1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員										
所長	2	6.0	往復			470,000			2,820,000	日本-35
主任技術者	3	6.0	往復			240,000			1,440,000	日本-36
橋梁技師(総合)	3	6.0	往復			240,000			1,440,000	日本-36
橋梁技師(鋼橋)	3	3.0	往復			240,000			720,000	日本-36
橋梁技師(鋼橋)	4	8.0	往復			240,000			1,920,000	日本-36
橋梁技師(PC橋)	3	4.0	往復			240,000			960,000	日本-36
橋梁技師(PC橋)	4	10.0	往復			240,000			2,400,000	日本-36
橋梁技師(基礎･下部工)	4	6.0	往復			240,000			1,440,000	日本-36
道路技師	4	4.0	往復			240,000			960,000	日本-36
事務･調達	4	12.0	往復			240,000			2,880,000	日本-36
日本国内旅費		65.0	往復			5,260			341,900	日本-33
		1	式						17,321,900.00	
		1	式						17,321,900.00	

SMC - 2

Item: Airfare for Experts

単価設定条件:

Specification:

1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
海外渡航費 技能工										
従業員 日本人技能工										
橋梁特殊工(溶接工)		2.0	往復			240,000			480,000	日本-36
橋梁特殊工(鋼橋架設)		4.0	往復			240,000			960,000	日本-36
橋梁特殊工(PC製作)		4.0	往復			240,000			960,000	日本-36
橋梁特殊工(PC架設)		2.0	往復			240,000			480,000	日本-36
橋梁特殊工(基礎工)		6.0	往復			240,000			1,440,000	日本-36
橋梁特殊工(下部工)		3.0	往復			240,000			720,000	日本-36
道路特殊工(軟弱地盤)		5.0	往復			240,000			1,200,000	日本-36
日本国内旅費		26.0	往復			5,260.00			136,760	日本-33
		1	式						6,376,760.00	
		1	式						6,376,760.00	

SMC - 3

Item: Overseas Remuneration 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員 海外報酬	格付									
所長	2	32.0	人･月			1,024,000			32,768,000	日本-1
主任技術者	3	32.0	人･月			910,000			29,120,000	日本-2
橋梁技師(総合)	3	32.0	人･月			910,000			29,120,000	日本-2
橋梁技師(鋼橋)	3	14.0	人･月			910,000			12,740,000	日本-2
橋梁技師(鋼橋)	4	42.0	人･月			744,000			31,248,000	日本-3
橋梁技師(PC橋)	3	20.0	人･月			910,000			18,200,000	日本-2
橋梁技師(PC橋)	4	52.0	人･月			744,000			38,688,000	日本-3
橋梁技師(基礎･下部工)	4	32.00	人･月			744,000			23,808,000	日本-3
道路技師	4	19.00	人･月			744,000			14,136,000	日本-3
事務･調達	4	64.0	人･月			744,000			47,616,000	日本-3
		339.0								
Total		1.00	式						277,444,000	
Unit price		1.00	式						277,444,000	

SMC - 4

Item: Overseas Remuneration 単価設定条件:

Specification: Experts 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 派遣費										
橋梁特殊工(溶接工)		10.0	人･月			789,000			7,890,000	
橋梁特殊工(鋼橋架設)		20.0	人･月			783,000			15,660,000	
橋梁特殊工(PC製作)		20.0	人･月			783,000			15,660,000	
橋梁特殊工(PC架設)		14.0	人･月			783,000			10,962,000	
橋梁特殊工(基礎工)		32.0	人･月			783,000			25,056,000	
橋梁特殊工(下部工)		16.0	人･月			783,000			12,528,000	
道路特殊工(道路･軟弱地盤)		19.0	人･月			783,000			14,877,000	
料金所システム		5.0	人･月			744,000			3,720,000	
技能工派遣費ならびに手当て										
日額										
橋梁世話役		29,900	人/日							
橋梁特殊工		26,100	人/日							
運転手(特殊)		21,200	人/日							
海外派遣月額										
橋梁世話役	日額×30	897,000	人/月							
橋梁特殊工	日額×30	783,000	人/月							
運転手(特殊)	日額×30	636,000	人/月							
Total		1.00	式						106,353,000	
Unit price		1.00	式						106,353,000	

SMC - 5

Item: Allowance 単価設定条件:

Specification: Experts 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 海外勤務手当て										
橋梁特殊工(溶接工)		10.0	人･月			284,040			2,840,400	
橋梁特殊工(鋼橋架設)		20.0	人･月			281,880			5,637,600	
橋梁特殊工(PC製作)		20.0	人･月			281,880			5,637,600	
橋梁特殊工(PC架設)		14.0	人･月			281,880			3,946,320	
橋梁特殊工(基礎工)		32.0	人･月			281,880			9,020,160	
橋梁特殊工(下部工)		16.0	人･月			281,880			4,510,080	
道路特殊工(道路･軟弱地盤)		19.0	人･月			281,880			5,355,720	
料金所システム		5.0	人･月			281,880			1,409,400	
技能工海外勤務手当て										
月額										
橋梁世話役		897,000	人/月							
橋梁特殊工		783,000	人/月							
溶接工		789,000	人/月							
海外勤務手当て										
橋梁世話役	月額×0.6*0.6	322,920	人/月							
橋梁特殊工	月額×0.6*0.6	281,880	人/月							
溶接工	月額×0.6*0.6	284,040	人/月							
Total		1.00	式						38,357,280	
Unit price		1.00	式						38,357,280	

SMC - 6

Item: Allowance 単価設定条件:

Specification: Engineer 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員海外手当										
所長	2	32.0	人/月			614,400			19,660,800.00	
主任技術者	3	32.0	人/月			546,000			17,472,000.00	
橋梁技師(総合)	3	32.0	人/月			546,000			17,472,000.00	
橋梁技師(鋼橋)	3	14.0	人/月			546,000			7,644,000.00	
橋梁技師(鋼橋)	4	42.0	人/月			446,400			18,748,800.00	
橋梁技師(PC橋)	3	20.0	人/月			546,000			10,920,000.00	
橋梁技師(PC橋)	4	52.0	人/月			446,400			23,212,800.00	
橋梁技師(基礎･下部工)	4	32.00	人/月			446,400			14,284,800.00	
道路技師	4	19.00	人/月			446,400			8,481,600.00	
事務･調達	4	64.0	人/月			446,400			28,569,600.00	
Total		1.00	式	0.00			0.00		166,466,400	
Unit price		1.00	式	0.00			0.00		166,466,400	

SMC - 7

Item: Accomodation cost 単価設定条件:

Specification: Engineer 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
従業員 宿泊手当										
所長	2	32.0	人/月			405,000			12,960,000	日本-22
主任技術者	3	32.0	人/月			348,000			11,136,000	日本-23
橋梁技師(総合)	3	32.0	人/月			348,000			11,136,000	日本-23
橋梁技師(鋼橋)	3	14.0	人/月			348,000			4,872,000	日本-23
橋梁技師(鋼橋)	4	42.0	人/月			348,000			14,616,000	日本-24
橋梁技師(PC橋)	3	20.0	人/月			348,000			6,960,000	日本-23
橋梁技師(PC橋)	4	52.0	人/月			348,000			18,096,000	日本-24
橋梁技師(基礎･下部工)	4	32.00	人/月			348,000			11,136,000	日本-24
道路技師	4	19.00	人/月			348,000			6,612,000	日本-24
事務･調達	4	64.0	人/月			348,000			22,272,000	日本-24
Total		1.00	式						119,796,000	
Unit price		1.00	式						119,796,000	

SMC - 8

Item: Experts from 3rd country 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国からの技能工、派遣費										
安全担当事務	ベトナム	32.0	人/月		(1000)			32,000		
上級土木技術者(鋼橋)	ベトナム	26.0	人/月		(1000)			26,000		
上級土木技術者(PC)	ベトナム	24.0	人/月		(1000)			24,000		
上級土木技術者(基礎工)	ベトナム	31.0	人/月		(1000)			31,000		
土木技術者(鋼橋)	ベトナム	10.0	人/月		(600)			6,000		
土木技術者(鋼橋)	ベトナム	14.0	人/月		(600)			8,400		
土木技術者(PC)	ベトナム	20.0	人/月		(600)			12,000		
土木技術者(PC)	ベトナム	24.0	人/月		(600)			14,400		
土木技術者(基礎・下部工)	ベトナム	16.0	人/月		(600)			9,600		
土木技術者(基礎・下部工)	ベトナム	16.0	人/月		(600)			9,600		
Total		1.00	式					173,000	19,568,030	
Unit price		1.00	式						19,568,030	

SMC - 9

Item: Airfare from 3rd country　　単価設定条件:

Specification: Experts　　1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
海外渡航費 第3国技能工										
安全担当事務	ハノイーヤンゴン	6.0	往復			31,700			190,200	
上級土木技術者(鋼橋)	ハノイーヤンゴン	5.0	往復			31,700			158,500	
上級土木技術者(PC)	ハノイーヤンゴン	5.0	往復			31,700			158,500	
上級土木技術者(基礎工)	ハノイーヤンゴン	6.0	往復			31,700			190,200	
土木技術者(鋼橋)	ハノイーヤンゴン	2.0	往復			31,700			63,400	
土木技術者(鋼橋)	ハノイーヤンゴン	5.0	往復			31,700			158,500	
土木技術者(PC)	ハノイーヤンゴン	4.0	往復			31,700			126,800	
土木技術者(PC)	ハノイーヤンゴン	2.0	往復			31,700			63,400	
土木技術者(基礎・下部工)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
土木技術者(基礎・下部工)	ハノイーヤンゴン	3.0	往復			31,700			95,100	
									0	
ベトナム航空ハノイーヤンゴン往復	31,700									
Total		1.00	式				0.00		1,299,700	
Unit price		1.00	式				0.00		1,299,700	

SMC - 10

Item: Allowance

単価設定条件:

Specification: Experts from 3rd country

1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国技能工、海外手当										
安全担当事務	月額報酬の60%	32.0	人/月		600.00			19,200		
上級土木技術者(鋼橋)	月額報酬の60%	26.0	人/月		600.00			15,600		
上級土木技術者(PC)	月額報酬の60%	24.0	人/月		600.00			14,400		3級相当･現地日額
上級土木技術者(基礎工)	月額報酬の60%	31.0	人/月		600.00			18,600		
土木技術者(鋼橋)	月額報酬の60%	10.0	人/月		360.00			3,600		
土木技術者(鋼橋)	月額報酬の60%	14.0	人/月		360.00			5,040		
土木技術者(PC)	月額報酬の60%	20.0	人/月		360.00			7,200		
土木技術者(PC)	月額報酬の60%	24.0	人/月		360.00			8,640		
土木技術者(基礎･下部工)	月額報酬の60%	16.0	人/月		360.00			5,760		
土木技術者(基礎･下部工)	月額報酬の60%	16.0	人/月		360.00			5,760		
Total		1.00	式					103,800		
Unit price		1.00	式							

SMC - 11

Item: Accomodation cost 単価設定条件:

Specification: Experts from 3rd country 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
第3国技能工、宿泊手当										
安全担当事務	JICA規定4級の40%	32.0	人/月			174,000			5,568,000	
上級土木技術者(鋼橋)	JICA規定4級の40%	26.0	人/月			174000			4,524,000	
上級土木技術者(PC)	JICA規定4級の40%	24.0	人/月			174,000			4,176,000	3級相当･現地日額
上級土木技術者(基礎工)	JICA規定4級の40%	31.0	人/月			174,000			5,394,000	
土木技術者(鋼橋)	JICA規定4級の40%	10.0	人/月			139,200			1,392,000	
土木技術者(鋼橋)	JICA規定4級の40%	14.0	人/月			139,200			1,948,800	
土木技術者(PC)	JICA規定4級の40%	20.0	人/月			139,200			2,784,000	
土木技術者(PC)	JICA規定4級の40%	24.0	人/月			139,200			3,340,800	
土木技術者(基礎･下部工)	JICA規定4級の40%	16.0	人/月			139,200			2,227,200	
土木技術者(基礎･下部工)	JICA規定4級の40%	16.0	人/月			139,200			2,227,200	
		213.0								
JICA規定4級の宿泊費/日	11600									
JICA規定4級の40%x30日	139200									
JICA規定4級の50%x30日	174000									
Total		1.00	式				0.00		33,582,000	
Unit price		1.00	式				0.00		33,582,000	

SMC - 12

Item: Accomodation cost 単価設定条件:

Specification: Japanese Experts 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
技能工 宿泊手当て										
橋梁特殊工(溶接工)	JICA規定4級の60%	10.0	人･月			208,800			2,088,000	
橋梁特殊工(鋼橋架設)	JICA規定4級の60%	20.0	人･月			208,800			4,176,000	
橋梁特殊工(PC製作)	JICA規定4級の60%	20.0	人･月			208,800			4,176,000	
橋梁特殊工(PC架設)	JICA規定4級の60%	14.0	人･月			208,800			2,923,200	
橋梁特殊工(基礎工)	JICA規定4級の60%	32.0	人･月			208,800			6,681,600	
橋梁特殊工(下部工)	JICA規定4級の60%	16.0	人･月			208,800			3,340,800	
道路特殊工(軟弱地盤)	JICA規定4級の60%	19.0	人･月			208,800			3,967,200	
料金所システム	JICA規定4級の60%	5.0	人･月			208,800			1,044,000	
JICA規定4級の宿泊費	11600									
JICA規定4級の60%x30日	208800									
Total		1.00	式				0.00		28,396,800	
Unit price		1.00	式				0.00		28,396,800	

SMC - 13

Item: Local staff Remuneration 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
現地人技術者、雇用費										
上級事務員		32.0	人・月	2,028,000		168,730	64,896,000		5,399,000	
調達・事務員		32.0	人・月	743,000		61,818	23,776,000		1,978,000	
上級土木技術者(設計)		32.0	人・月	2,028,000		168,730	64,896,000		5,399,000	
土木技術者(設計)		52.0	人・月	1,550,000		128,960	80,600,000		6,706,000	
土木技術者(鋼橋施工計画)		7.0	人・月	1,550,000		128,960	10,850,000		903,000	
土木技術者(PC橋施工鋼計画)		7.0	人・月	1,550,000		128,960	10,850,000		903,000	
土木技術者(下部工施工計画)		16.0	人・月	1,550,000		128,960	24,800,000		2,063,000	
土木技術者(鋼橋製作)		20.0	人・月	1,550,000		128,960	31,000,000		2,579,000	
土木技術者(鋼橋架設)		34.0	人・月	1,550,000		128,960	52,700,000		4,385,000	
土木技術者(PC箱桁製作)		44.0	人・月	1,550,000		128,960	68,200,000		5,674,000	
土木技術者(PC箱桁架設)		14.0	人・月	1,550,000		128,960	21,700,000		1,805,000	
土木技術者(基礎工)		32.0	人・月	1,550,000		128,960	49,600,000		4,127,000	
土木技術者(下部工)		48.0	人・月	1,550,000		128,960	74,400,000		6,190,000	
土木技術者(道路・軟弱地盤)		38.0	人・月	1,550,000		128,960	58,900,000		4,900,000	
料金所エンジニア		5.0	人・月	1,550,000		128,960	7,750,000		645,000	
土木技術者(試験室)		82.0	人・月	1,090,000		90,688	89,380,000		7,436,000	
土木技術者(試験室Ope..)		52.0	人・月	520,000		43,264	27,040,000		2,250,000	
CAD オペレーター		310	人・月	546,000		45,427	169,260,000		14,082,000	Cost for Pay Item 01150-01
警備員		93	人・月	266,000		22,131	24,738,000		2,058,000	
事務連絡係		62.0	人・月	338,000		28,122	20,956,000		1,744,000	
秘書		32.0	人・月	490,000		40,768	15,680,000		1,305,000	
Total		1,044.0								
Total		1.00	式				991,972,000		82,531,000	77,424,000 (事務員、オフィスボーイ、運転手除く)
Unit price		1.00	式				991,972,000		82,531,000	

SMC -　　14

Item:　Welfare expense　　単価設定条件:

Specification:　　1　式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Welfare expense										
Welfare expense		1.0	一式			4,038,628			4,038,628	
Welfare expense(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				480,789,000						
B: 福利厚生相当率(%)= 12750/A + 0.82 =12750/598487 + 0.82 =		0.84								
ただし、A **<1500万円の場合は、1.67%とする。**										
Total		1.00	式				0.00		4,038,628	
Unit price		1.00	式				0.00		4,038,628	

SMC - 15

Item: Office supplies 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Office supplies										
Office supplies		1.0	一式			14,279,433			14,279,433	3級相当･現地日額
Office supplies(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				480,789,000						
B: 福利厚生相当率(%)= 30134/A + 2.92 =30134/598487 + 2.92 =		2.97								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	式				0.00		14,279,433	
Unit price		1.00	式				0.00		14,279,433	

SMC - 16

Item: Communication cost

単価設定条件:

Specification:

1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Communication cost										
Communication cost		1.0	一式			5,336,758			5,336,758	3級相当･現地日額
Communication cost(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				480,789,000						
B: 福利厚生相当率(%)= 21199/A + 1.076 =21199/598487 + 1.076 =		1.11								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	式				0.00		5,336,758	
Unit price		1.00	式				0.00		5,336,758	

SMC - 17

Item: Social expenses 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Social expenses										
Social expenses		1.0	一式			5,144,443			5,144,443	3級相当･現地日額
Communication cost(千円)=A x B /100										
A: 現場管理要員賃金総額＋労務費(事務員、オフィスボーイ、運転手等)を除く現地雇人賃金総額				480,789,030						
B: 福利厚生相当率(%)= 28244/A + 1.017 =28244/598487 + 1.017 =		1.07								
ただし、A **<2000万円の場合は、4.43%とする。**										
Total		1.00	式				0.00		5,144,443	
Unit price		1.00	式				0.00		5,144,443	

SMC - 18

Item: Car Rental Cost 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Car Rental Cost										
Alphard		96.0	car/M	1,800,000		149,760			14,376,960	
Parado		528.0	car/M	2,500,000		208,000			109,824,000	
Parado		160.0	car/M	2,500,000		208,000			33,280,000	
Hi-Lux		0.0	car/M							
Pro-Box		160.0	car/M	900,000		74,880			11,980,800	
Total		1.00	式				0.00		169,461,760	
Unit price		1.00	式				0.00		169,461,760	

SMC - 19

Item: Cost for Meeting of Defect Inspection 単価設定条件:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
瑕疵検査立会費用										
1)従業員海外報酬										
所長	2級	0.5	月･人			1,024,000			512,000	3級相当･現地日額
主任技師	3級	0.5	月･人			910,000			455,000	
計									967,000	
2)海外渡航費、従業員										
所長	2級	1.0	往復			470,000			470,000	
主任技師	3級	1.0	往復			240,000			240,000	
計									710,000	
3)国内旅費										
所長/主任技師		2.0	往復			5,260			10,520	
4)海外手当、従業員										
所長	2級	15.00	人･日			4,500			67,500	
主任技師	3級	15.0	人･日			3,800			57,000	
計									124,500	
5)海外宿泊費、従業員										
所長	2級	13.0	人･日			13,500			175,500	
主任技師	3級	13.0	人･日			11,600			150,800	
計									326,300	
Total		1.00	式				0.00		2,138,320	
Unit price		1.00	式				0.00		2,138,320	

SMC - 20

Item: HIV/AIDS Prevension Plan 単価設定条件:

Specification: Without Campaign 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
HIV/AIDS Prevension Plan										
Awareness and Education for Prevension Program		1.0	式	9,268,000			9,268,000			
HIV Testing for 700 workers		1.0	式	5,600,000			5,600,000			
Peer Educations Training		1.0	式	4,510,000			4,510,000			
Total		1.00	式				19,378,000			
Unit price		1.00	式				19,378,000			

SMC - 21

Item: Monitoring equipment setting_Engineer cost Sourse:

Specification: 1 式

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Engineer cost_Quatation		1.00	LS			327,864	0	0	327,864	
*including allowance, residence fee, transportation fee										
Total		1.00	式	0			0.00		327,864	
Unit price		1.00	式				0.00		327,864	

SMC - 22

Item: Environmental monitoring cost Sourse:

Specification: PKG2 1 LS

Item	Specification	Quantity	Unit	Unit price			Amount			Remarks
				Local (MMK)	Foreign (USD)	Main (JPY)	Local (MMK)	Foreign (USD)	Main (JPY)	
Total cost		4.00	times		3,900.00		0	15,600	0	
Total		1.00	LS	0			0.00	15,600.00	0.00	
Unit price		1.00	LS				0.00	15,600.00	0.00	

PART 2

PACKAGE 3

Republic of the Union of Myanmar

Detailed Design Study on Bago River Bridge Construction Project

Project Cost Estimate (Package 3)

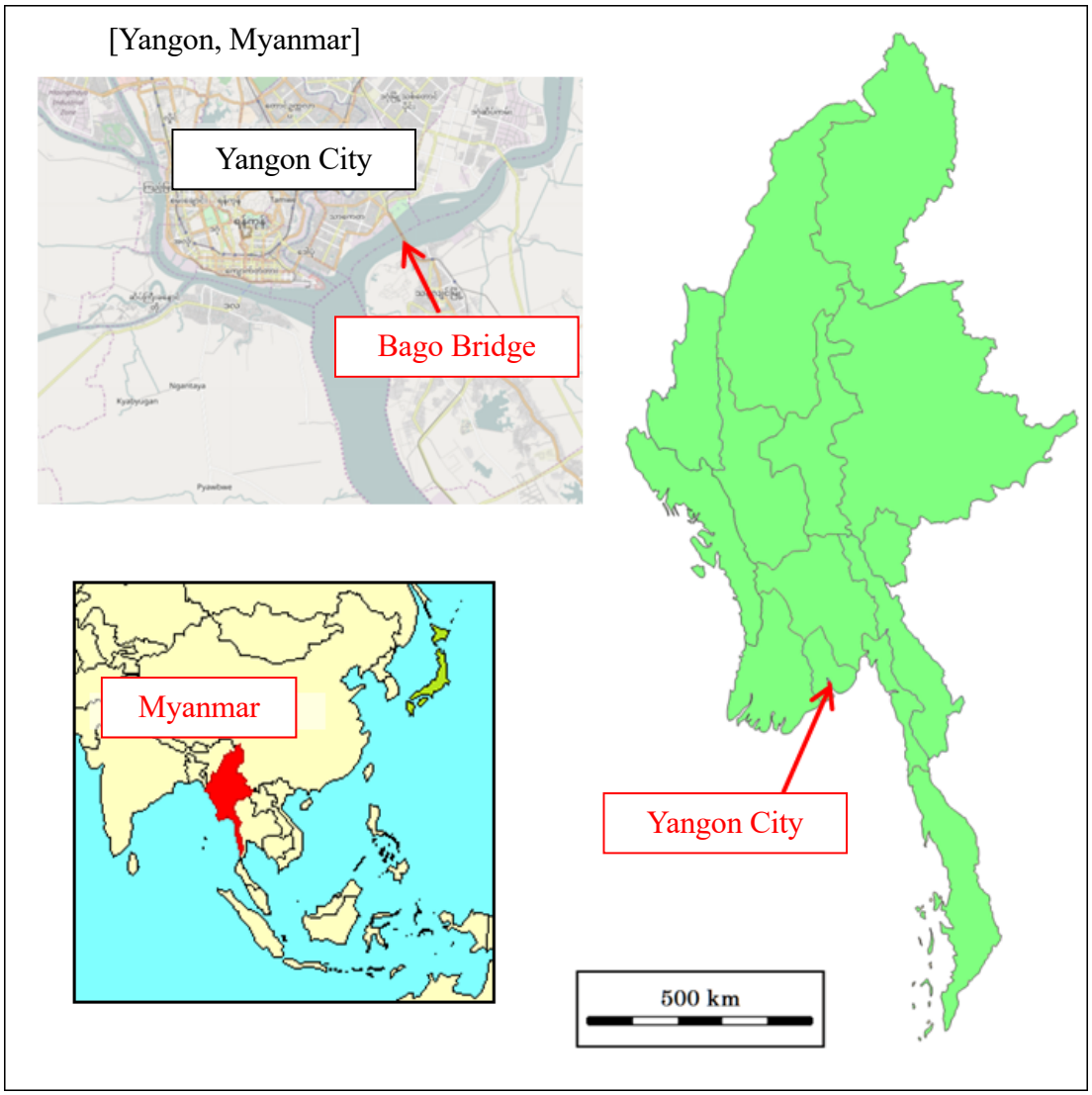
1. Project Overall

1 PROJECT OUTLINE

1.1 Project Area

Republic of the Union of Myanmar (hereinafter Myanmar) has attracted attention as the "Asia's last frontier" after the transfer of power to a civilian government in 2011. Located in an important geopolitical area – bordering China, India and Southeast Asia – Myanmar is still listed as Least Developed Country (LDC), with huge infrastructure deficiency and economic inequality issues to be overcome by the next governments.

The location of Myanmar and the Project area the basic data of Myanmar are shown in Figure 1.1-1 and Table 1.1-1 respectively.



Source: JICA Study Team

Figure 1.1-1 Project Area

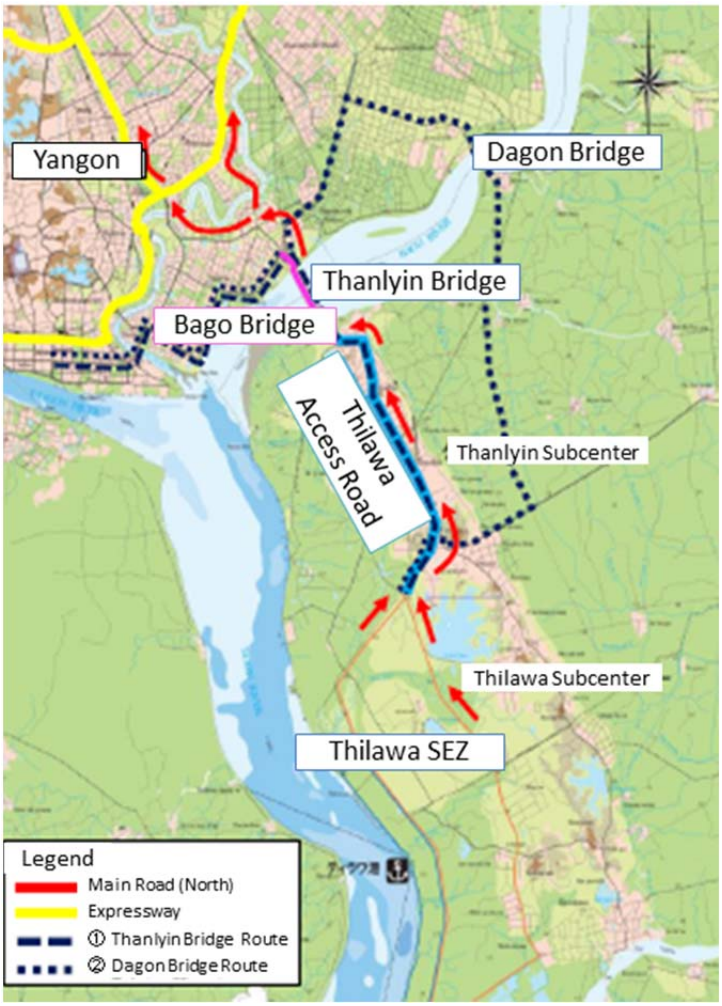
Table 1.1-1 Basic data of Myanmar

Population	51.41 million	Main Activities	Agriculture
Area	0.56 m2	Capital	Nay Pyi Daw
Nominal GDP	USD 68.3 billion （2016 fiscal year, IMF estimation）	GDP per capita	USD 1,307 （2016 fiscal year, IMF estimation）
Language	Burmese	GDP Growth Rate	6.3%（2016 fiscal year, IMF estimation）
Ethnic groups	Burmese (~ 70%) and others ethnic minorities	Religion	Buddhism（90%）、Christianity、Islam etc.

Source：Myanmar Basic Data (Japan Ministry of Foreign Affairs)

1.2 Construction Area

The project construction area is shown in Figure 1.2-1.

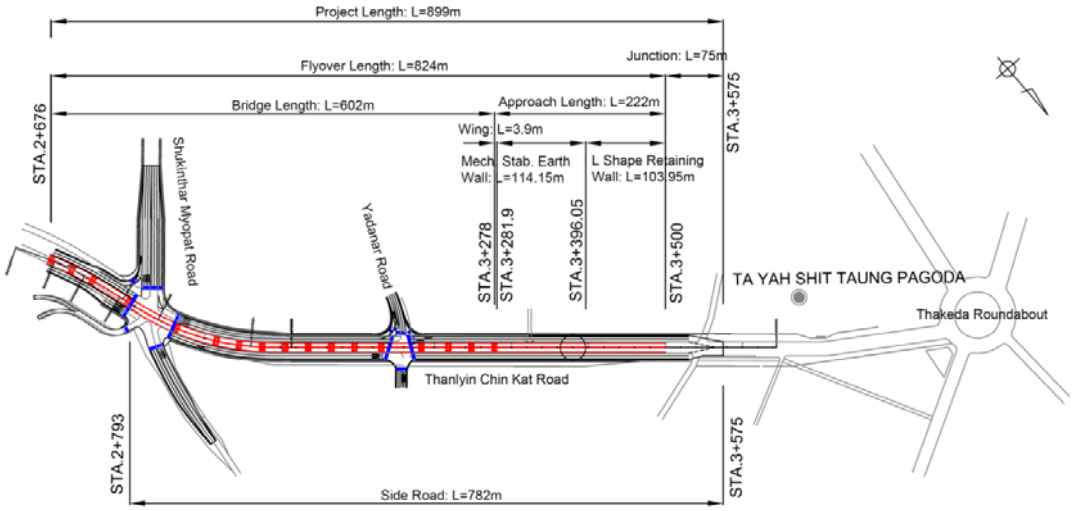


Source: JICA Study Team

Figure 1.2-1 Construction Area

1.3 General View

The general view of the flyover section is shown in Figure 1.3-1.



Source: JICA Study Team

Figure 1.3-1 General View of Flyover (1/3)

1.4 Outline of the Project Implementation Plan

1.4.1 Outline

1） Background

Japan International Cooperation Agency (hereinafter “JICA”) has conducted the “The Strategic Urban Development Plan of the Greater Yangon (2013)” (hereinafter “SUDP”) and the “Project for Comprehensive Urban Transport Plan of the Greater Yangon (2014)” (hereinafter “YUTRA”) in Yangon city – Myanmar’s largest city. These studies confirmed the importance of the connectivity between Yangon area and the suburban areas; and the connectivity between Thanlyin suburban areas.

There are currently two bridges separating Thanlyin area and the centre of Yangon. Thanlyn Bridge – in Bago River downstream – is a road-rail bridge with one vehicle lane each way and one rail line; currently the bridge operates with load restriction due aging structure. Heavy vehicles have to detour to Dagon Bridge – in Bago River upper stream – with three lanes each way; however the distance travelled between Yangon and Thilawa increases 20km.

The traffic demand is expected to increase between Yangon and Thanlyin area as consequence of Thilawa Social Economic Zone (hereinafter “SEZ”) development; also both studies suggested the traffic capacity won’t be sufficient. YUTRA study concluded that Bago Bridge should be constructed first because the traffic volume on the existing Thanlyin Bridge exceeded the traffic

capacity in 2015. SUDP study recommends the improvement of the traffic network with the construction of new bridges – Bago Bridge – to develop the Greater Yangon region.

2） Objective

Bago River Bridge construction will contribute to the development of Thanlyin area, improving logistics network between Yangon and Thilawa SEZ. As consequence, it's also expected to spur Myanmar's economic growth.

3） Package 3 Outline

Package 3 has a flyover section with approximate 600m of bridges and an approach road with 220m length; also a side road section with 780m length. Package 3 scope is shown in Table 1.4-1.

Table 1.4-1 Outline of the Construction

Flyover in Thaketa area [Length：899m]		
Construction Period：30 months		
1) Flyover	Bridge Length	602m
	Total width	12.75m (2 lanes)
	Superstructure Type	2 spans continuous PC-I Girder: 60.0m 3 spans continuous Steel Box Girder: 180.0m 2 spans continuous PC-I Girder: 60.0m 4 spans continuous PC-I Girder:120.0m 3 spans continuous Steel-I Girder: 122.0m 2 spans continuous PC-I Girder: 60.0m
	Substructure (Pier)	15 RC T-shape pier
	Substructure (Abutment)	2 Reversed T-shape Abutment
	Foundation	97 Cast-in-place RC Pile (φ1500 / L=32.5～41.5m)
2) Approach Road (AF2 side) *[1]	Total length	222.0m
	RC Wing	3.9m
	Mech. Stab. Earth wall	114.2m
	L-type retaining wall	103.9m
	Total width	12.75m
3) Widening of Thanlwin Chin Kat road*[2]	Total length	782.0m
	Total width (inc. sidewalk)	10.5~11.5m (4 lanes)

*[1] AF.1 side approach road is included in "Package 2" scope.

*[2] Windening of Thanlyin Chin Kat road at tentative stage shall be undertaken by MOC.

Source: JICA Study Team

2. Construction Planning

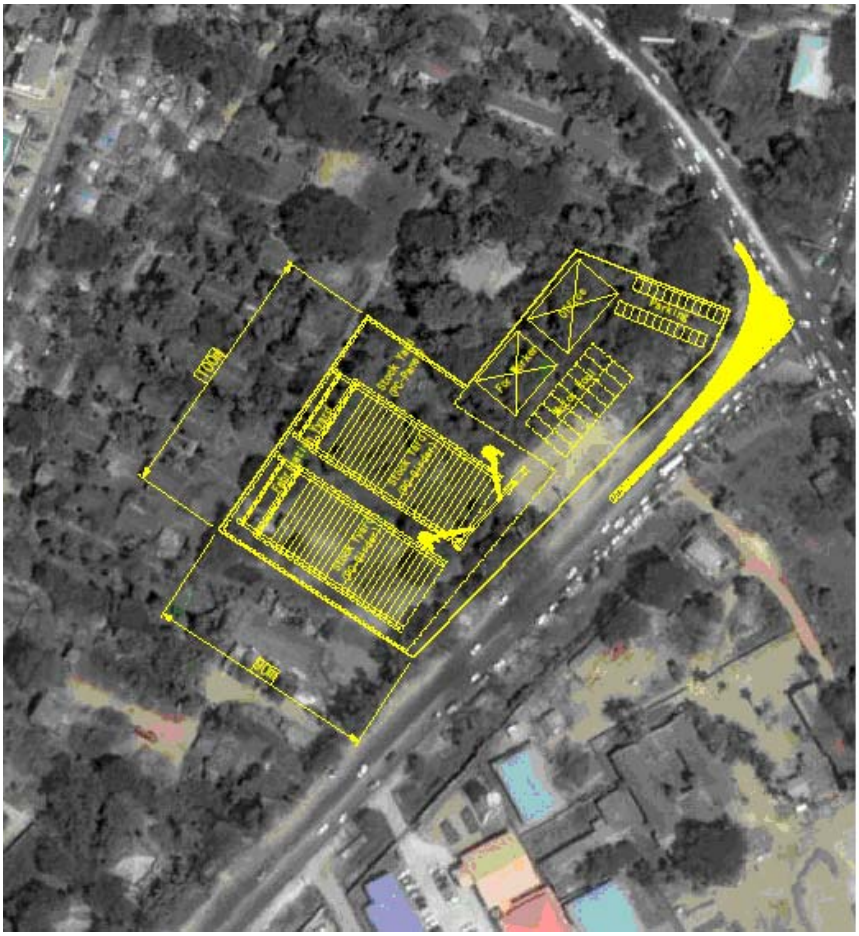
2 CONSTRUCTION PLANNING

2.1 Plan of Construction Sequence

2.1.1 Direct Construction

1) Temporary yard

The construction yard is expected to receive the following facilities: contractor's office, motor poor, labour dormitory, PC girder fabrication and stock yard as shown in Figure 2.1-1. Consultant's office was considered in the other package.



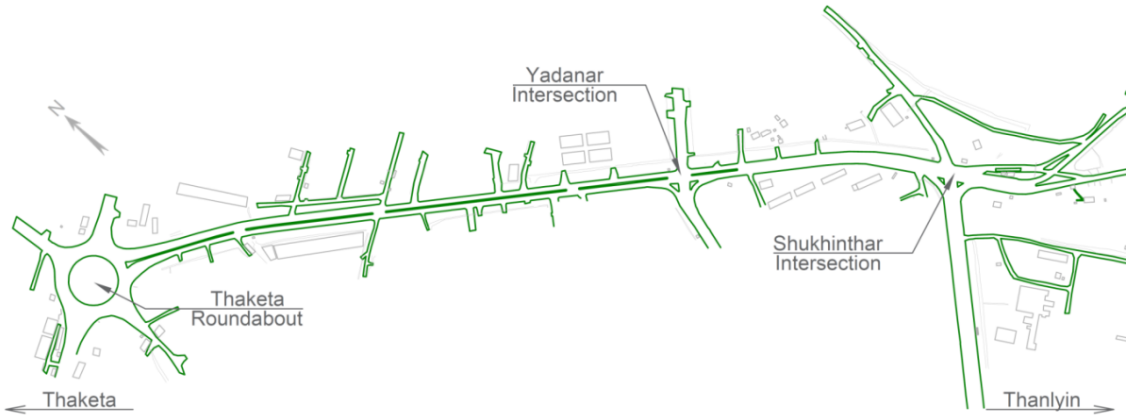
Source: JICA Study Team

Figure 2.1-1 Temporary Yard Location

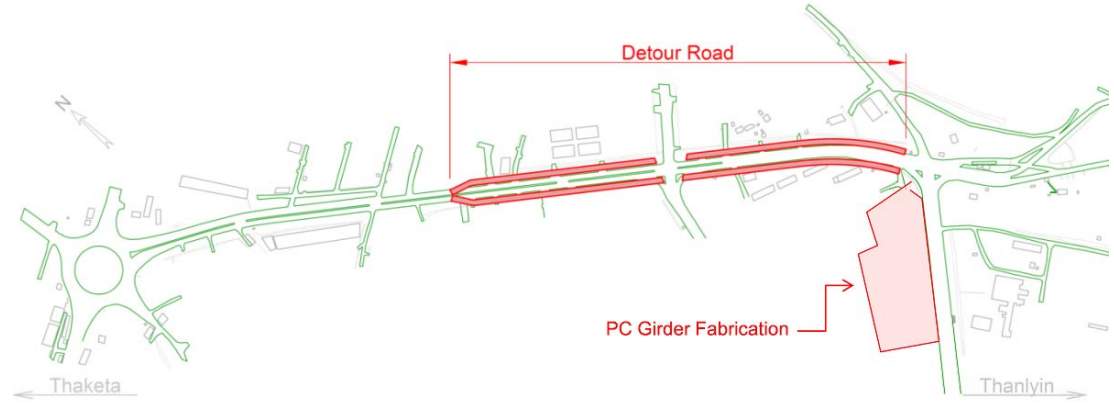
2) Construction Outline

The construction outline is shown in Figure 2.1-2 to Figure 2.1-4. For more details refer to "Detailed Design Study on Bago River Bridge Construction Project Final Report".

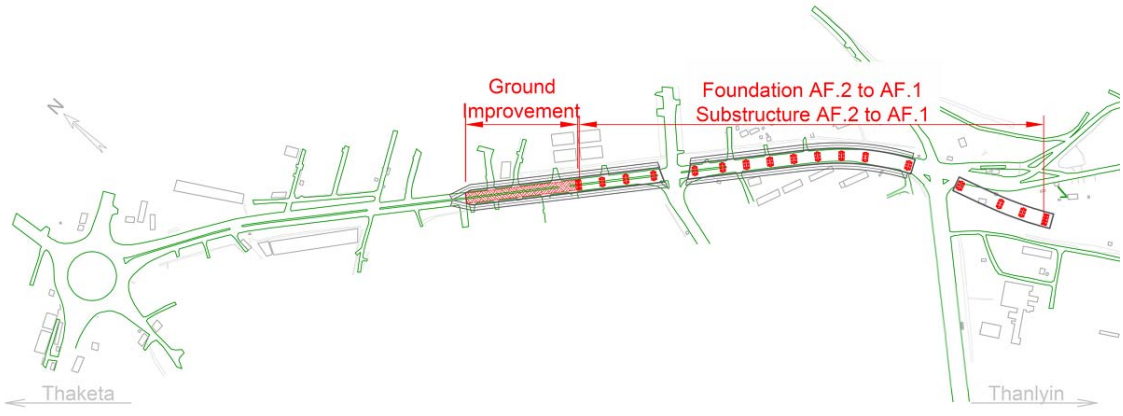
Step 0: Current situation



Step 1: Build the temporary yard / Detour the current road to the final alignment



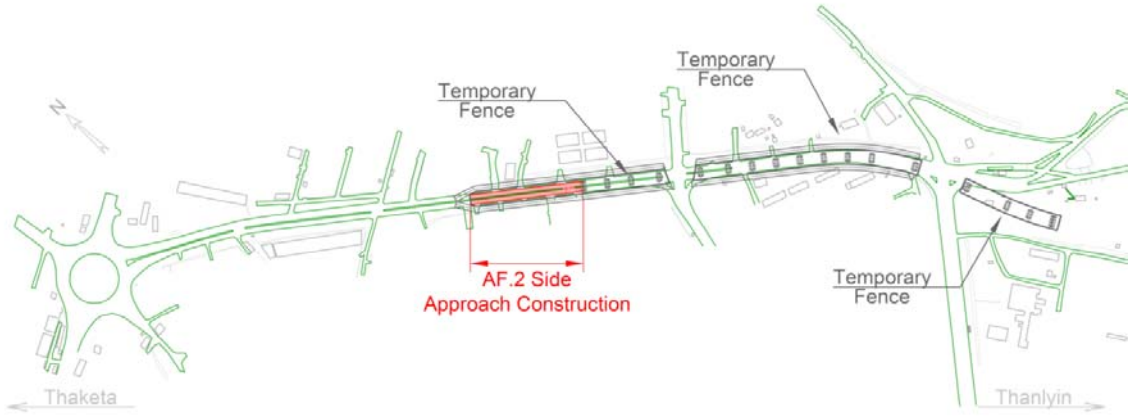
Step 2: Soft ground treatment and foundation/substructure



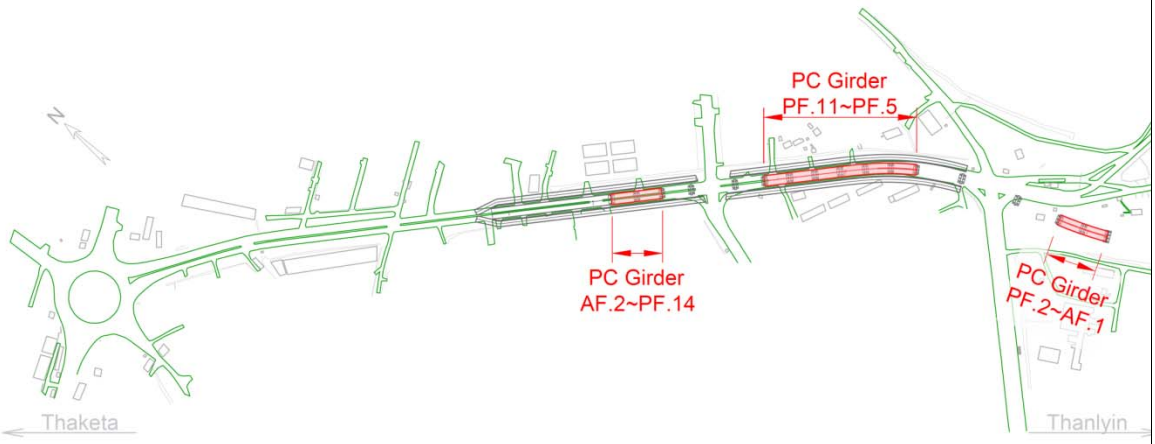
Source: JICA Study Team

Figure 2.1-2 Construction Steps Outline (1/3)

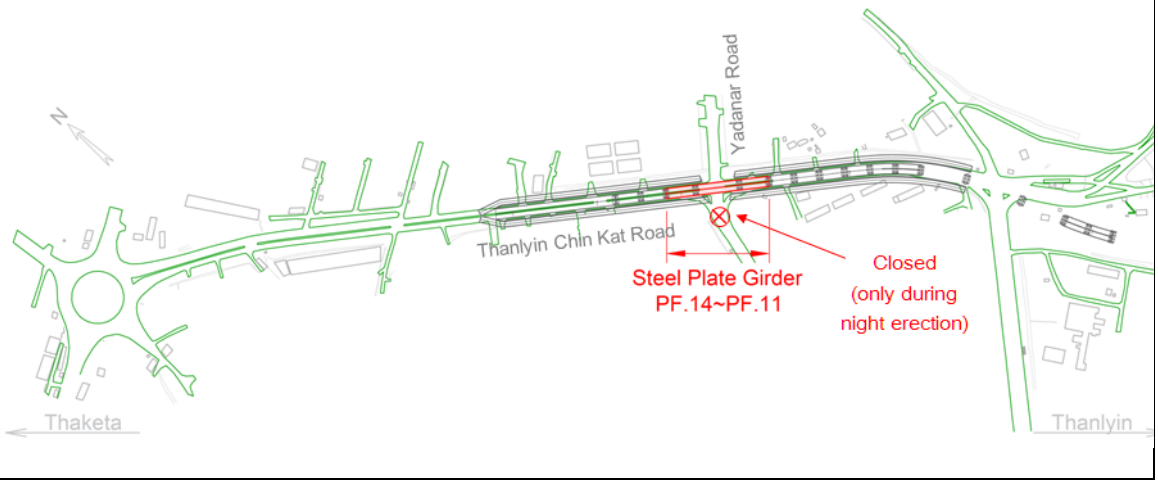
Step 3: Reinf. earth wall & AF.2 approach construction



Step 4: PC girder erection



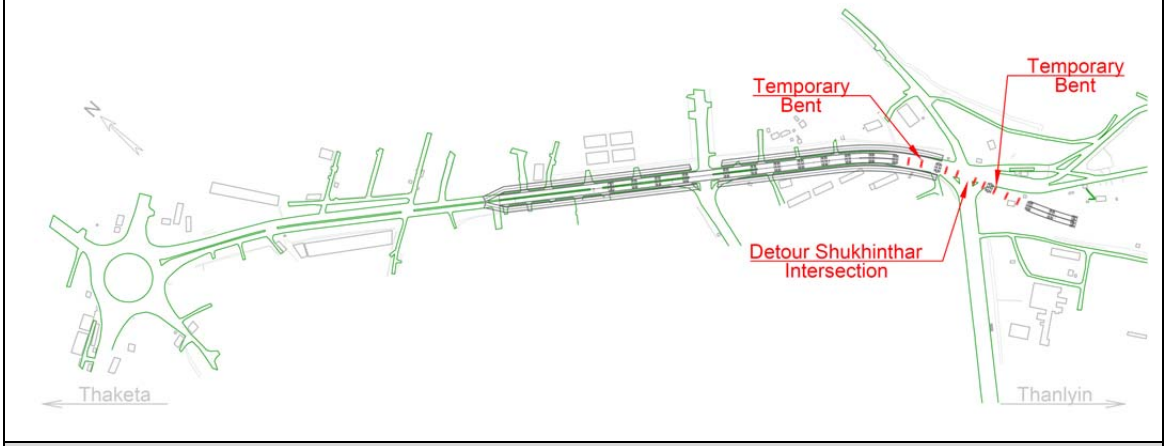
Step 5: Steel plate girder erection



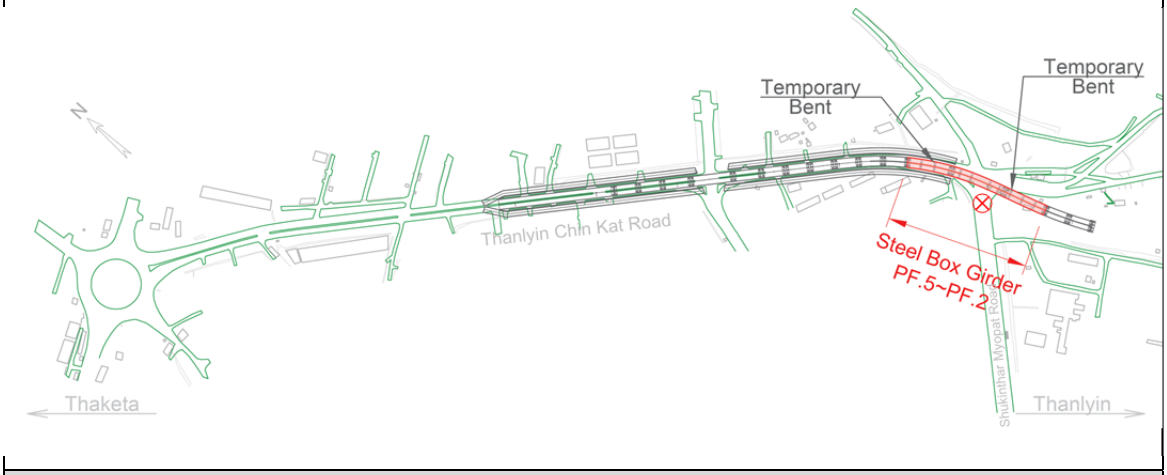
Source: JICA Study Team

Figure 2.1-3 Construction Steps Outline (2/3)

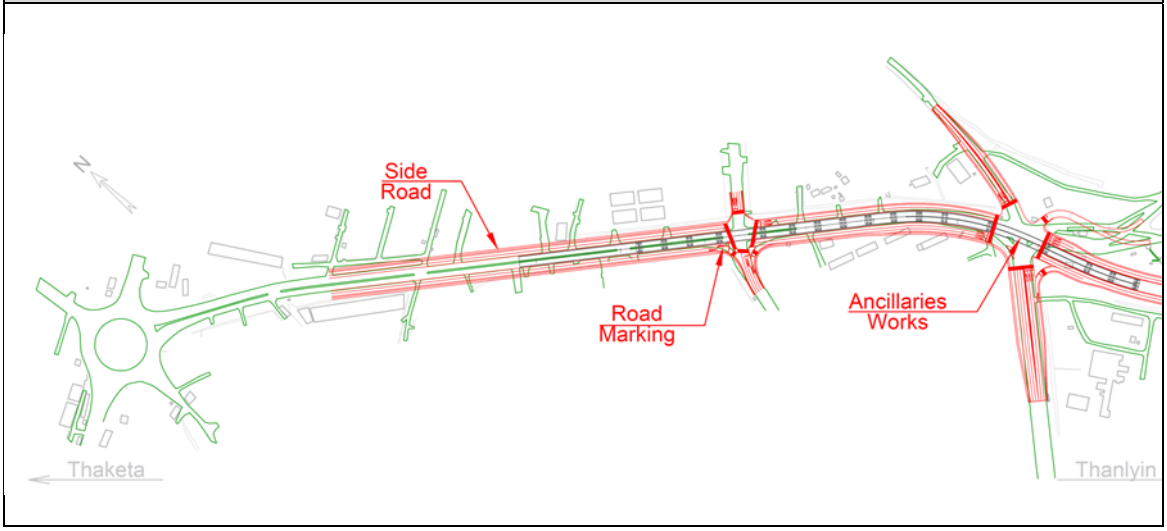
Step 6: Temporary bents installation at Shukhinthar Intersection



Step 7: Steel box girder erection



Step 8: Pavement, drainage, side road, ancillaries, etc.



Source: JICA Study Team

Figure 2.1-4 Construction Steps Outline (3/3)

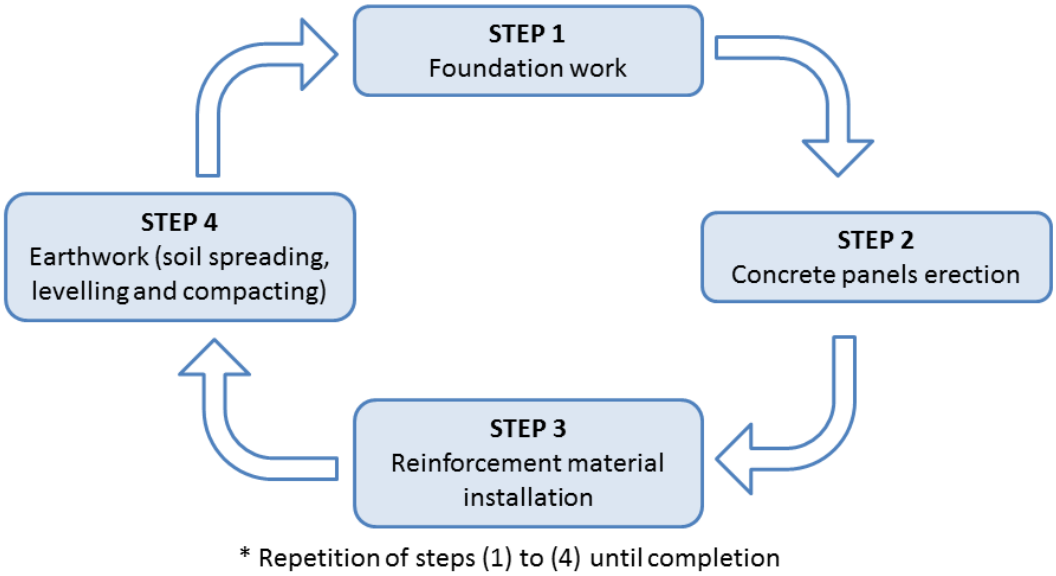
3） Road Works

（１） Soft Soil Treatment

The sections behind AF.1 and AF.2 abutment are expected to have differential settlement and lack of bearing capacity due a silt layer. It's necessary to make a deep layer ground improvement and the alternative adopted is a cement deep mixing method (dual shaft type φ1200mm), which is a relative expensive improvement method. The main components – slurry plant and rough terrain crane – can be installed and operated inside the construction site. Considering the construction period, it's necessary only one ground improvement equipment set.

（２） Retaining Walls and Embankment

Mechanically stabilized earth wall using precast concrete panels and L-type cast-in-situ retaining wall are adopted in the approach section. The construction steps of mechanically stabilized earth wall are shown in Figure 2.1-5. Also, it's necessary to use an adequate soil material, compaction method and compaction degree control to ensure the quality of the constructed embankment.



Source: JICA Study Team

Figure 2.1-5 Mechanically Stabilized Earth Wall Construction Steps

（３） Pavement

Concrete asphalt mix was adopted in road/bridge sections. It can be locally procured from near asphalt plants.

4） Bridge Works

（１） Foundation

Reverse circulation drilling method was adopted to construct the foundations – 1500mm diameter

cast in situ pile – due cost efficiency and constructability factors. The construction site is limited by the two detour roads; therefore the construction is expected to be done with only one crane.

（２） Substructure

(a) Excavation

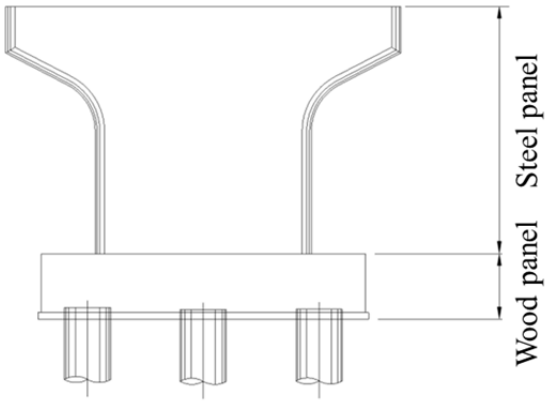
Excavation for piers/abutments construction has only 3m deep. Self-supporting trench with soldier pile and timber lagging excavation method was adopted in the transversal direction due the poor ground condition and the detour road traffic safety. In the longitudinal direction, open-cut excavation method was adopted, since excavation zone is inside the construction site area and isn't affected by the local traffic.

(b) Bottom Surface

A 20 cm crush stone layer plus a 10 cm concrete C18 layer shall cover the bottom surface to guarantee the stability of the rebar arrangement.

(c) Main Substructure Elements

The main substructure elements are divided in the footing, column and pier head. For piers column and pier head, metallic formwork shall be adopted to guarantee the constructability and surface quality of the curved/variable sections of those elements as shown in Figure 2.1-6. Four metallic formwork sets fabricated in Japan or a 3rd country need to be transported to the construction site, reused for the construction of all piers and then recycled as scrap.



Source: JICA Study Team

Figure 2.1-6 Formwork Type

（３） Superstructure

(a) Steel Box Girder

Steel box girder raw material is imported from Japan, fabricated in Myanmar or nearly countries,

transported to the project site, assembled into a larger block in the construction yard. Then the block is transported using a heavy load trailer and erected in position using a 200t crawler crane. The erection requires a temporary bent structure; therefore, the traffic in Shukinthar Myopat intersection is expected to be detoured for approximate 1 week during night time for the girder erection.

(b) Steel-I Girder

Similar to the steel box girder, steel-I girder raw material is imported from Japan, fabricated in Myanmar or nearly countries, transported to the project site, assembled into a larger block in the construction yard. Then the block is transported using a heavy load trailer and erected in position using a 100t crawler crane. The erection requires a temporary bent structure; therefore, the traffic in Yadanar intersection is expected to be detoured for approximate 1 week during night time for the girder erection.

(c) PC-I Girder

Post tensioned PC-I girder and precast slab panels are fabricated and stored in a temporary yard. During the night time, each girder is transported to the site using a heavy load trailer. The erection – during night time – requires two 180t crawler cranes due the girder weight (~80t) and the erection site limited space.

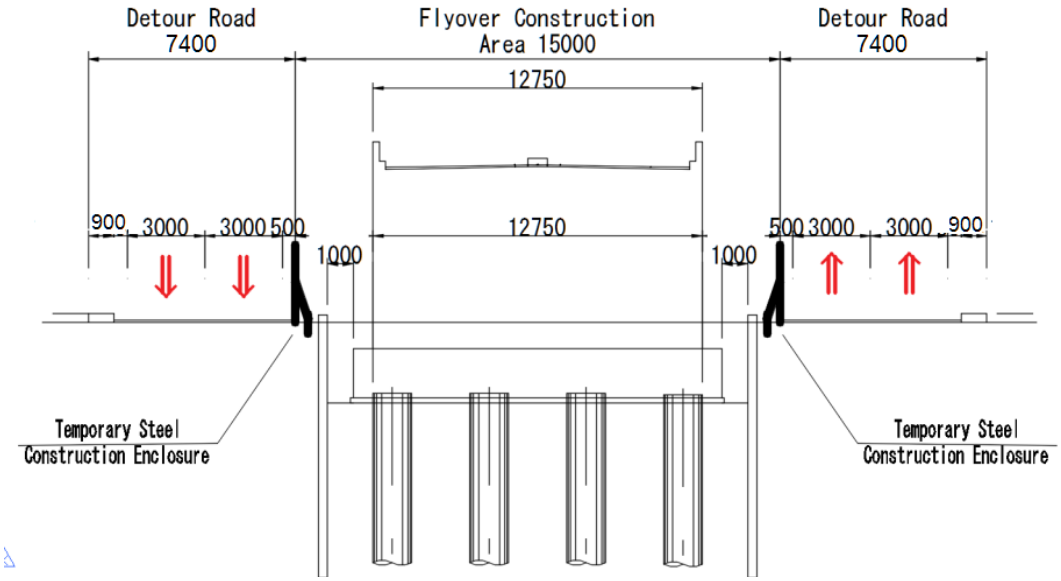
(d) Bridge Deck Works

The bridge deck works are expected to start from AF.2 abutment, since material and labour can access by the approach road side.

5）Traffic Control Plan During Construction

（1） Temporary Road

The construction site of the flyover section is located over the central area of an existing 4-lane road. The existing road shall be diverted in a similar position of the final configuration as shown in Figure 2.1-7.



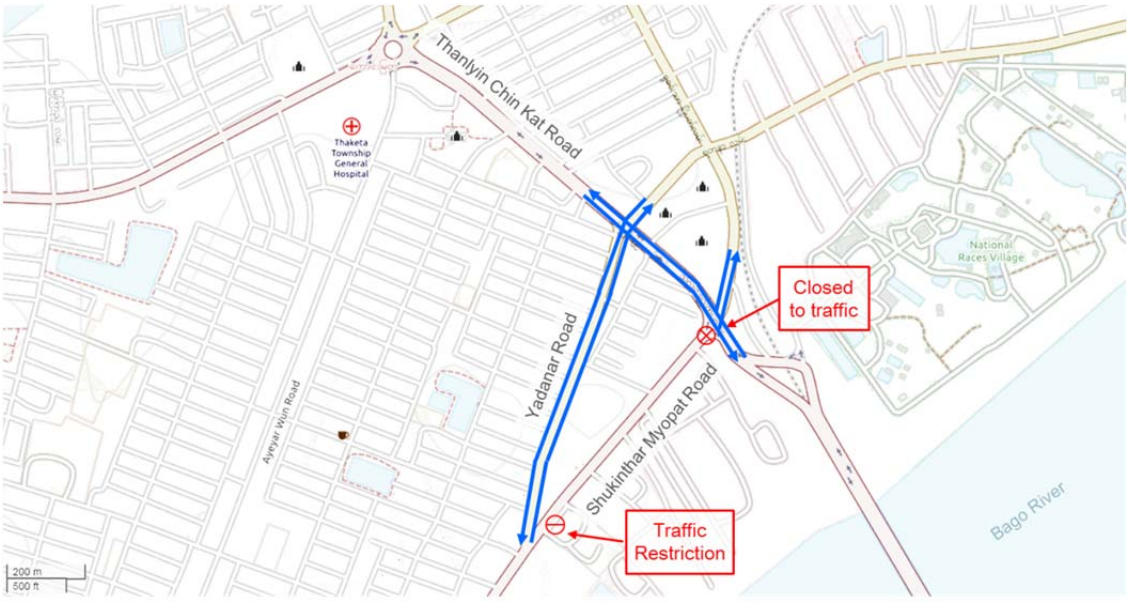
Source: JICA Study Team

Figure 2.1-7 Temporary Road Plan

（２） Detour Road

(a) Shukinthar Myopat Intersection

Shukinthar Myopat intersection is expected to be closed for about one week during night time for steel box girder erection. During this period, the traffic is expected to be detoured to Yadanar intersection as shown in Figure 2.1-8.

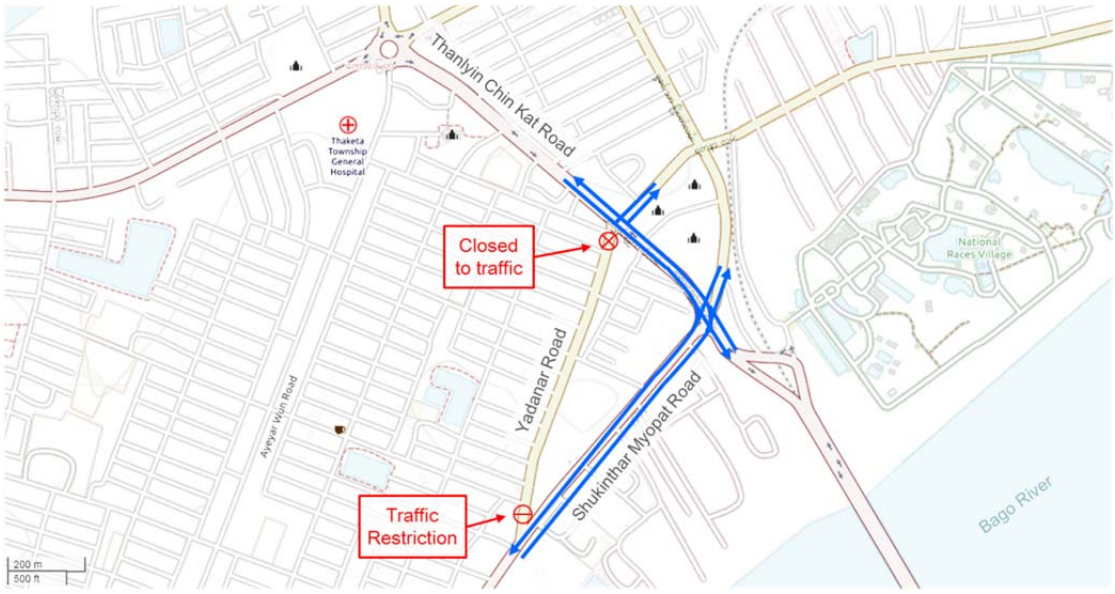


Source: JICA Study Team

Figure 2.1-8 Steel Box Girder Erection – Shukinthar Myopat Intersection

(b) Yadanar Intersection

Yadanar intersection is expected to be closed for about one week during night time for steel plate girder erection. During this period, the traffic is expected to be detoured to Shukinthar Myopat intersection as shown in Figure 2.1-9.



Source: JICA Study Team

Figure 2.1-9 Steel Plate Girder Erection – Yadanar Intersection

2.1.2 Outsourced Construction

Not applicable in this project.

2.1.3 Temporary Facilities

1） Safety Management

One Japanese engineer and one local engineer in charge of site safety management were assigned for the period shown in Attach 4-2 and included in the cost estimate.

2） Traffic Supervision

One local engineer and four flagmen in charge of traffic supervision were assigned for the period shown in Attach 4-2 and included in the cost estimate

3） Environment Supervision

One local engineer in charge of environment supervision were assigned for the period shown in Attach 4-2 and included in the cost estimate

4） Quality Control

According to JICA Manual P.73, two Japanese engineers – 2nd and 3rd rank – were assigned for five days in the site plus two days for dispatch. The quality control meeting is realized twice a year.

5） Defect Inspection

According to JICA Manual P.73, one Japanese engineer – 3rd rank – was assigned for three days in the site plus two days for dispatch. Defect inspection meeting is realized one year after the completion of the civil works.

2.1.4 Site Supervision

1） Contractor Site Supervision Plan

Contractor site supervision staff – Japanese and local – is shown in item 2.4.1.

2.2 Procurement Plan

1） Labour

（1） Labour Law

Myanmar law does not contain a special labour code. However basic labour rights & obligations, labour union are governed by specific laws. It's recommended to check specific laws and regulations before the beginning of the project. As reference, basic labour information was based in "Factories and General Labour Laws" as shown in Table 2.2-1.

Table 2.2-1 Labour Regulation Outline

Right & Obligations	Regulation
Working Hours	Less or equal 8 hours per day and less or equal 44 hours per week ※ However, in case there is a technical reason, until 48 working hours per week is accepted.
Resting Hours	30 minutes or more for every 5 hours of work
Total Hours	Less or equal 10 hours (Working hours plus resting hours)
Holidays	Sunday is a legal day off day. ※In case of Sunday work, the worker shall receive a day off within 3 days, or no more than two months later from the worked Sunday day.
Overtime and Holiday Work Allowance	More or equal 200% of the average salary

Source: JETRO Myanmar Labour Guidebook

（２） Civil Engineer

A shortage of engineers, managers and skilled workers has been a problem in Myanmar. The number of student studying in universities overseas is increasing; however most of them don't return to Myanmar, therefore the number of engineers with international experience is limited. The quantity of engineers with basic technical knowledge is expected to increase with JICA's support to engineering higher education – in particular, Yangon Technological University support since 2013. Also, Burmese people – technical and ordinary citizens – have considerably high English communication abilities.

（３） Visa

Foreign workers in ODA projects in Myanmar need a working visa that is valid for 70 days. Even with multiple entry visa is necessary to leave the country every 70 days. In case of the resident permit is possible to stay for three months to one year depending on each case.

2） Construction Material

Major construction materials procurement country is expected as shown in Table 2.2-2. Steel products are expected to be procured from Japan, on the other hand, concrete and asphalt materials are expected to be procured from Myanmar.

Table 2.2-2 Major Construction Material Procurement

Description	Myanmar	Japan	Others	Remark
Steel Girder Material		○		
Reinforcement Bar		○		
PC Strand		○		
Concrete	○			
Cement	○			
Bearing		○		
Expansion Joint		○		
Parapet		○		
Drainage		○		
Asphalt Concrete	○			
Subgrade Material	○			
Road Lighting	○			
Traffic Lights		○		

Source: JICA Study Team

3） Construction Equipment

Expected major construction equipment procurement country is shown in Table 2.2-3. Pile and soil improvement equipment are expected to be procured from Japan, others equipment are expected to be procured from Myanmar.

Table 2.2-3 Major Construction Equipment Procurement

Description	Myanmar	Japan	Others	Remark
Bulldozer	○			
Backhoe	○			
Dump Truck	○			
Truck	○			
Crawler Crane	○			
Truck Crane	○			
Rough Terrain Crane	○			
Hydraulic Arm Lift Platform	○			
Vibro Hammer	○			
Extraction Jack		○		
Reverse Circulation Drill		○		
Deep Layer Mixing Machine		○		
Cement Slurry Plant		○		
Motor Grader	○			
Road Roller	○			
Pneumatic Tire Roller	○			
Vibration Roller	○			
Tamper	○			
Concrete Pump Truck	○			
Asphalt Finisher	○			
Line Marker	○			
Road Marking Paint Preheater	○			
Generator	○			
Pin Grabber Coupler	○			
Gantry Crane	○			
Giant Breaker	○			
Bent	○			
Platform Trailer	○			
Temporary Tightening Bolt	○			
Drift Pin	○			

Source: JICA Study Team

2.3 Shipping Plan

2.3.1 Customs Clearance

According to “Myanmar Import/Export Procedure” by JETRO, the followings steps are necessary for custom clearance.

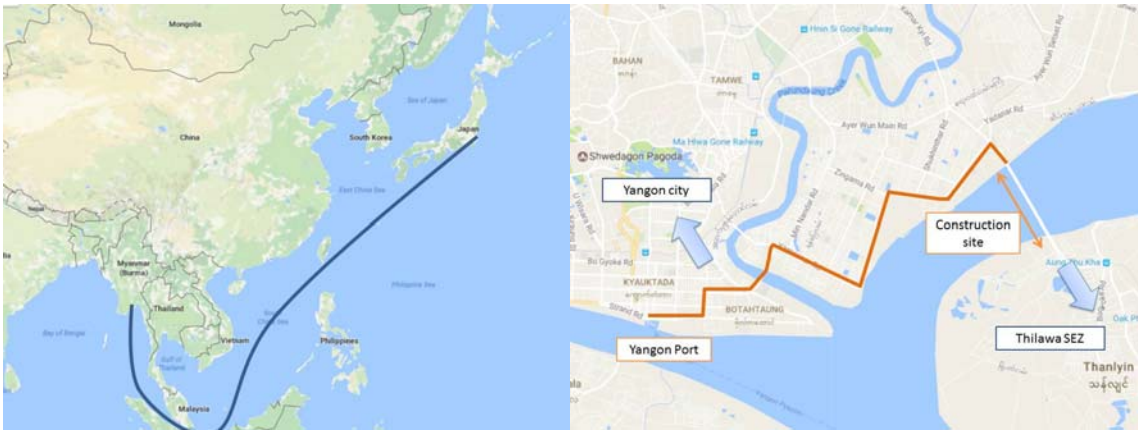
1) Establish a trade business company
2) Apply for import/exporter registration in the Department of Trade from the Ministry of Commerce
3) Join the Union of Myanmar Federation of Chambers of Commerce and Industry
4) Obtain import licence if necessary
5) After opening a foreign currency account in a Myanmar's bank for settlement, is possible to submit necessary documents for clearing out custom

The following points should be noted:

a. It's necessary to open a local company for import and export, since foreign companies are prohibited to establish a trade company.
b. The custom procedures – declaration, inspection, duties payment and license – are electronic and the cargo items need to be register in MACCS (Myanmar Automated Cargo Clearance System) before custom clearance.
c. It's necessary to check items that require import license in the Import Negative List Order issued by the Department of Trade from the Ministry of Commerce.
d. To receive tax exemption it's necessary an exemption letter from the Ministry of Finance, after obtaining an introduction letter issued by the relevant authority from custom.

2.3.2 Freight Route

Freight route expected for construction materials and machinery procured from Japan is shown in Figure 2.3-1.



Source: JICA Study Team

Figure 2.3-1 Freight Route

1) Sea Route

Construction materials and equipment procured from Japan are expected to enter in Myanmar

thought Yangon Port. Shipping takes in average 25 days from Japan to Yangon Port and the expected sea route is shown in the left side of Figure 2.3-1.

2） Land Route

Materials & machinery are unloaded in Yangon Port and then transported for approximate 5 km to the construction site through Maha Bandula Bridge. Due the high freight volume YCDC and the police department restrained the container traffic inside Yangon city. However it's not expected problems in the transport since the road has 4 well-maintained lanes and heavy traffic is allowed – except during rush hour – to use land route shown in the right side of Figure 2.3-1.

2.3.3 Shipping Time

The route between Japanese ports to Yangon Port is used by many container ships; however bulk carrier ships come only once a month. The sizes of ship which can enter Yangon Port are limited since is a river port and the water depth is shallow, sometimes is necessary to wait for the high tide to enter in the port. The shipping time required to transport the cargo from storehouses/factories in Japan to the project site is shown in Table 2.3-1.

Table 2.3-1 Shipping Time

Required Transportation	Days
Storehouses/Factories ~ Ports in Japan	7 days
Ports in Japan ~ Yangon Port	17 ～ 33 days
Waiting and discharging at Yangon Port	7 days
Customs Clearance	2 ～ 3 days
Yangon Port ~ Construction Site	1 ～ 2 days
Total (1)	34 ～ 52 days
Total (2)	1.75 months

Source: JICA Study Team

2.4 Design and Construction Supervision Plan

2.4.1 Consultant Design and Construction Supervision Plan

Consultant staff is considered separated.

2.4.2 Contractor Site Supervision Plan

Contractor staff is shown in Table 2.4-1 ~ Table 2.4-3.

1) Japanese Staff

Table 2.4-1 Japanese Site Supervision Staff

Staff	Rank	Japan (M/M)	Local (M/M)	Trip Number	Tasks & Responsibilities
Chief Engineer	3	-	30.00	5	− Site technical supervision, construction planning, schedule monitoring, quality, cost control and safety management. − Report and discuss with the Engineer, Client and others stakeholders aspect regarded to the construction.
Site Manager	3	-	30.00	5	− Organize the entire site operational activities. − Quality control supervision. − Material delivery / supply chain flow management. − Technical assistance for labours of the construction.
Civil Engineer (Steel Bridge)	4	-	7.50	1	− Organize the operational activities related to steel bridge. − Delegate duties for to site workers related to steel bridge. − Report and discuss aspect regarded to the steel bridge construction.
Civil Engineer (PC Bridge)	3	-	15.00	2	− Organize the operational activities related to PC bridge. − Delegate duties for to site workers related to PC bridge. − Report and discuss aspect regarded to the PC bridge construction.
Civil Engineer (General)	3	-	27.00	4	− Organize general civil works operational activities. − Delegate duties for to site workers related to general civil works. − Report and discuss aspect regarded to general civil works.
Civil Engineer (Pavement)	3	-	3.50	2	− Organize the operational activities related to pavement works. − Delegate duties for to site workers related to pavement works. − Report and discuss aspect regarded to the pavement works.
Civil Engineer (Ground Improvement)	3	-	8.57	1	− Organize the operational activities related to ground improvement works. − Delegate duties for to site workers related to ground improvement works. − Report and discuss aspect regarded to the ground improvement works.
Civil Engineer (Safety)	3	-	25.00	4	− Site safety management, including supervise the traffic safety. − Report and discuss with the Engineer, Client and others stakeholders aspect regarded to site safety.
Quality Control Engineer 1	2	-	1.17	5	− Ensure the quality procedures are implemented during the construction − Report and discuss with the Engineer, Client and others stakeholders aspect regarded to quality.
Quality Control Engineer 2	3	-	1.17	5	− Ensure the quality control during the construction − Assist “Quality Control Engineer 1” activities
Defect Inspection Engineer	3	-	0.17	1	− Defect inspection activities one year after project completion. − Report and discuss with the Engineer and Client.
Office Administrator	3	-	28.00	5	− Site office management − Documents control, payments and others administrative tasks − Japanese office coordination
Accountant	3	-	28.00	5	− Accounting management − Paying salary for local staffs
Total		**-**	**205.08**	**45**	

Source: JICA Study Team

2） Technical Staff

Table 2.4-2 Japanese Technical Staff

Staff	Japan (M/M)	Local (M/M)	Trip Number	Tasks & Responsibilities
Foremen	-	10.43	2	−Supervise reverse circulation drilling activities
Equipment Operator	-	8.57	1	−Operate soil improvement equipment
Total	-	**19.00**	**3**	

Source: JICA Study Team

3） Local Staff

Table 2.4-3 Local Site Supervision Staff

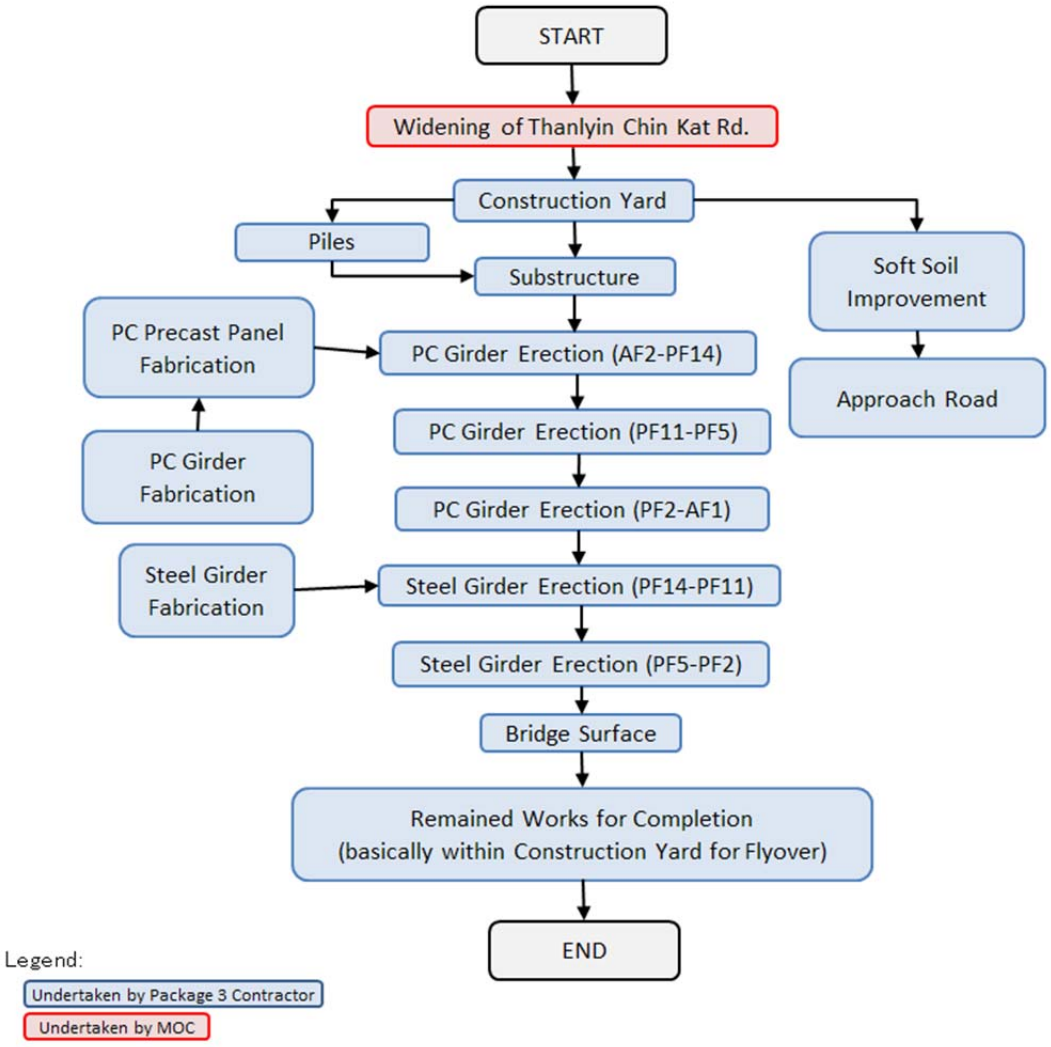
Staff	Japan (M/M)	Local (M/M)	Trip Number	Tasks & Responsibilities
Civil Engineer (Steel Bridge)	-	7.50	-	− Delegate duties for to site workers related to steel bridge. − Assist Japanese “Civil Engineer (Steel Bridge)”
Civil Engineer (PC Bridge)	-	14.50	-	− Delegate duties for to site workers related to PC bridge. − Assist Japanese “Civil Engineer (PC Bridge)”.
Civil Engineer 1 (General)	-	29.00	-	− Delegate duties for to site workers related to general civil works. − Assist Japanese “Civil Engineer (General)”.
Civil Engineer 2 (General)	-	28.00	-	− Delegate duties for to site workers related to general civil works. − Assist Japanese “Civil Engineer (General)”.
Civil Engineer (Road)	-	27.00	-	− Delegate duties for to site workers related to road works. − Assist Japanese “Civil Engineer (Pavement)”.
Civil Engineer (Equipment)	-	27.00	-	− Delegate duties for to site workers related to equipment maintenance and related activities.
Civil Engineer (Electric)	-	27.00	-	− Delegate duties for to site workers related to electric works. − Assist Japanese “Civil Engineer (General)”.
Civil Engineer (Environmental)	-	27.00	-	− Monitor the site and collect data related with environmental monitoring − Assist Japanese “Civil Engineer (Safety)”.
Civil Engineer (Safety)	-	27.00	-	− Ensure / Implement the site safety policies − Assist Japanese “Civil Engineer (Safety)”.
Civil Engineer (Traffic)	-	25.00	-	− Delegate duties for to site workers related to traffic activities. − Assist Japanese “Civil Engineer (Safety)”.
Civil Engineer (Quality Management)	-	27.00	-	− Implement quality control policies. − Assist “Quality Control Engineer 1 & 2” activities.
Surveyor	-	27.00	-	− Collect topographic measurements, record data & reporting.
Assistant Surveyor	-	27.00	-	− Assist “Surveyor”.
Drafter 1	-	27.00	-	− Prepare construction drawings.
Drafter 2	-	27.00	-	− Prepare construction drawings.
Clerk	-	28.00	-	− General administrative duties. − Assist Japanese “Office Administrator”.
Accountant	-	30.00	-	− General accounting duties. − Assist Japanese “Accountant”.
Security Guard (2 staff×2 shifts)	-	112.00	-	− Secure the office personnel & patrol the site.
Office Boy	-	28.00	-	− Help administrative assistants in performing their duties.
Flagmen (4 staff)	-	100.00	-	− Direct the traffic in site area.
Total	-	**672.00**	-	

Source: JICA Study Team

2.5 Construction Schedule Plan

2.5.1 Construction Sequence

The expected construction sequence is shown in Figure 2.5-1.



Source: JICA Study Team

Figure 2.5-1 Flow of Construction Sequence

2.5.2 Construction Schedule Calculation

1) Estimated Construction Activities Duration

The duration of each activity was calculated according to the civil works quantities based on the construction productivity rates defined in the cost estimate standards.

2) Rainy and Dry Season

Myanmar has a tropical monsoon climate. As winter ends, warm and moist air from the Indian

Ocean is carried by southwest wind promoting a large amount of rain during the rainy period. During the dry season, there is clear weather for several days until the end of April. For schedule purposes, the rainy season was set up from June to August in conformity with Package 1 & 2.

3) Working Days Correction Coefficient

Working days correction coefficient takes in consideration the number of days stopped due to weekends, holidays and adverse weather conditions – such as heavy rainfall. Considering the rainfall volume and others factors, this project was classified as a "General Construction Works". According to JICA manual was applied the correction value of 1.35 to estimate each activity duration. Also, it was assumed that all works – except large soil compaction activities – could be done during the rainy season from June to August.

2.5.3 Construction Equipment Rental Period

Rental period for construction equipment procured from Japan is shown in Figure 2.5-2. Rental cost during the transportation period – in orange (see Item 2.3.3) – was also included in the cost estimation.

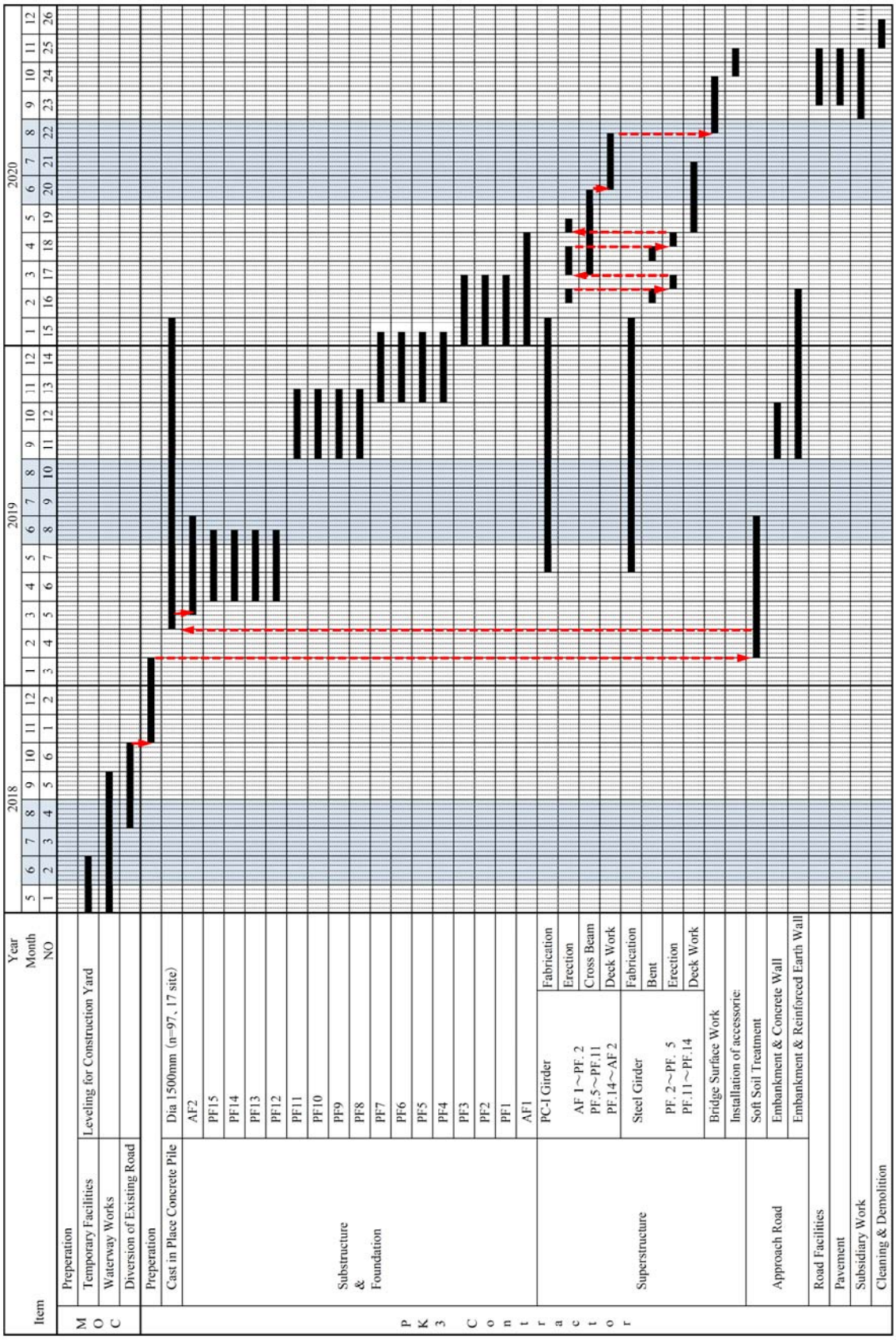
			Year	2018			2019										2020		
			Fiscal Y.	FY 2018			FY 2019												
			Month	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Construction Machinary Plan	Item	Specification	Qty.																		
	Extraction Jack	Pile Inner Diam. Φ1480mm	1																		
	Reverse Circulation Drill	Φ3200mm	1																		
	Deep Layer Mixing Machine	2 axis・1200mm・Up to 20m	1																		
	Cement Slurry Plant	20m3/h	1																		

Source: JICA Study Team

Figure 2.5-2 Construction Equipment Rental Period

2.5.4 Construction Schedule

The construction schedule for Package 3 is shown in Figure 2.5-3.



Source: JICA Study Team

Figure 2.5-3 Construction Schedule

2.5.5 Critical Path

The critical path sequence – red arrows in Figure 2.5-3 – is resumed below:

- Drainage Works & Side Road Works: The drainage works and the detour around the AF.2 abutment area for the ground improvement activities is necessary to finish before the commencement of the civil works for Package 3.
- Preparation Works: Swamp area improvement for yard facilities
- Soft Soil Treatment Works (AF.2 Side): The ground improvement near the abutments have to be executed before the piles, otherwise the piles may suffer lateral deformation due the ground improvement activities.
- Foundation Works and Substructure: Those activities must be finished for erection of the superstructure.
- Superstructure: Girder erection (PC girder, steel plate girder and box girder), slab and bride surface works.
- Pavement: Bridge section asphalt pavement construction
- Demobilization Works: Removal of the construction yard

3. Cost Estimate Conditions

3 COST ESTIMATE METHOD & CONDITIONS

3.1 Cost Estimate Policy

According to the proposal, the project cost was estimated according to the Ministry of Land, Infrastructure and Transportation (MLIT) standards (Japan). This estimation considered each works quantities calculated based on the detailed design results and the unit price collected in Myanmar of construction material, machinery and labour.

It was considered as reference MOC construction division unit cost; however this unit cost is much cheaper than the market price because MOC construction division already have their own supply chain and construction equipment. In principle the information collected from private companies in Myanmar was used in this cost estimate.

3.2 Cost Estimate Base Date

The project cost estimated base date is 31st May, 2017; when JICA Study Team finished the quotation and data collection works for Package 3 in Yangon/Myanmar.

3.3 Currency Exchange Rate

The currency adopted is Myanmar Kyat (MMK), US Dollar (USD) and Japanese Yen (JPY). According to JICA Guideline, USD to JPY rate was based on TTS exchange rate of "The Bank of Tokyo-Mitsubishi UFJ Ltd" and USD to MMK rate was based on exchange rate of "The Central Bank of Myanmar". The rate adopted for detail design stage was the last three months average rate – from 1st February to 30th April of 2017 – as shown in Table 3.3-1.

Table 3.3-1 Exchange Rates

Currency	Exchange Rates
US dollar (USD)	1 USD ＝ 113.11 JPY 1 USD ＝ 1358 MMK
Local Currency: Myanmar Kyat (MMK)	1 MMK ＝ 0.0832 JPY

Source: The Bank of Tokyo-Mitsubishi UFJ, Ltd and Central Bank of Myanmar

3.4 Tax

The same criteria of the feasibility study were adopted. The commercial tax cost of 5% over the construction cost and the import tax cost of 5% over the foreign portion.

3.5 Cost Estimate Standards

Since there isn't cost estimate standard for bridge construction projects in Myanmar and

according to the project proposal, it was adopted the followings Japanese cost estimate standard as shown in Table 3.5-1.

Table 3.5-1 Standard of Cost Estimate Adopted

Japan International Cooperation Agency (JICA)
▪ Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Civil Engineering), 2016 ▪ Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 ▪ Preliminary Project Cost Estimate Guideline, 2008
Construction Research Institute
▪ Cost Estimate Standard for Civil Works (MLIT), 2016, 2015, 2013, 2012 ▪ Standard Specification of Cost Estimate for Civil Works (MLIT), 2015 ▪ Cost Estimate Standard for Civil Works (MOC), 2000, 1999, 1993, 1992 ▪ Construction Material Cost, April, 2017
Japan Construction Machinery and Construction Association
▪ Construction Equipment Depreciation Calculation, 2016 ▪ Bridge Erection Works Cost Estimation, 2014

Source: JICA Study Team

3.6 Productivity Correction

The Japanese productivity of labour and equipment were corrected using the coefficient in Table 3.6-1 according to the Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Civil Engineering).

Table 3.6-1 Productivity Correction Coefficient (Asia Region)

Correction Type	Coefficient
Correction Coefficient for Simple Workers	1.5
Correction Coefficient for Technical Workers	2.5
Correction Coefficient for Simple Equipment	85%
Correction Coefficient for General Equipment	75%

Source: JICA Study Team

3.7 Price Escalation

Price escalation rate adopted is shown in Table 3.7-1 and was estimated according the Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Civil Engineering). This cost estimate considered the price escalation from the cost estimate base date (May, 2017) until the construction midpoint period (July 2019).

Table 3.7-1 Estimated Price Escalation (From May, 2017 to July, 2019)

	JPY Portion	MMK Portion
Estimated Price Escalation	3.438%	14.435%

Source: International Monetary Fund

3.8 Others

3.8.1 Indirect Costs

1） Demarcation

Indirect cost incurred in the flyover and the side road construction was included in the eligible portion of JICA Yen Loan.

2） Site Management Cost

According to MLIT Standard, the site management cost is the sum of the following 16 items.

Table 3.8-1 Site Management Cost Items

01) Supervision Personal Cost	Calculated based on supervision MM and JICA Unit Price
02) Safety Training Cost	Safety Manager MM was added in Construction Schedule
03) Tax & Duties	Fixed Assets Tax≒0 (Site Office), Car Tax≒0 (Rental)
04) Construction Insurance	Contract Work Price × Insurance Fee (0.5%)
05) Employee Allowances	Included in JICA Unit Price, 2017
06) Retirement Allowance	Included in JICA Unit Price, 2017
07) Legal Welfare Expenses	Included in JICA Unit Price, 2017
08) Employee Benefit Expenses	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.46
09) Office Supply Cost	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.47
10) Telecommunication Cost	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.47
11) Social Expenses	Preparatory Survey for Grant Aid / Design and Cost Estimate Manual (Equipment Procurement), 2016 P.49
12) Compensation Cost	Calculated in separated
13) Specialized Subcontractor Cost	None
14) Construction Registration Cost	None
15) Utilities Cost	Water = Water well、Gas = None、Electricity = Generator
16) Miscellaneous	AIDS prevention campaign etc.

Source: JICA Study Team

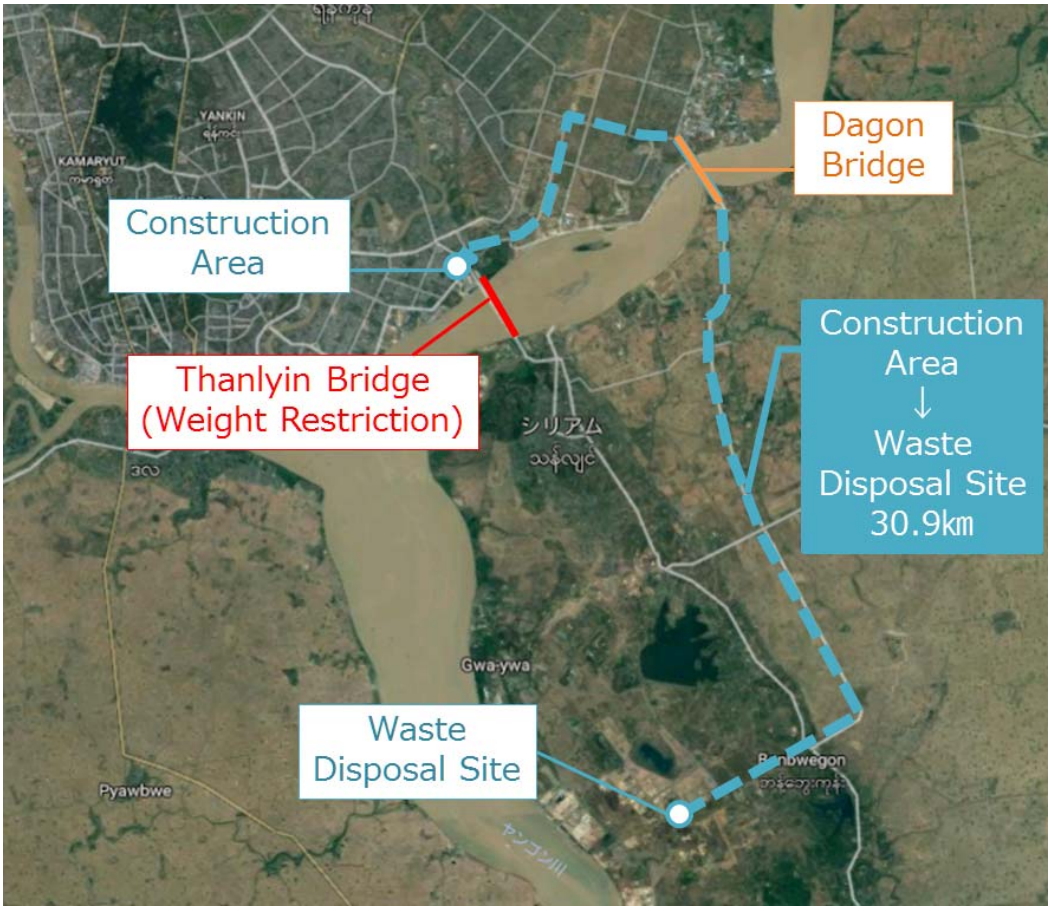
3.8.2 Approach Road (AF.1 Side)

The ground improvement of the approach road in AF.1 side has to be executed prior to the piles, since any lateral ground displacement could compromise the pile bearing capacity. Considering the construction order, AF.1 side ground improvement construction/costs were included in Package 3. Construction/costs of embankment, retaining wall and approach slab constructed after the ground improvement were included in Package 2.

3.8.3 Waste Transport and Disposal

1) Concrete and Asphalt Waste

Concrete and asphalt waste resulting from the construction must be discarded in an appropriate disposal site; the expected route is shown in Figure 3.8-1. The route via Dagon Bridge has to be used, since Thanlyin Bridge has weight restriction. The distance from the construction area to the disposal site is approximate 30.9 km.



Source: JICA Study Team

Figure 3.8-1 Expected Transport Route

2) Soil Waste

A specific soil disposal site near the construction site couldn't be confirmed during this study; however soil material is expected to be necessary in Package 2; therefore Package 3 soil waste is supposed to be used in Package 2 and the estimated transportation distance from the construction site is less than 5 km.

3) Organic Waste

Wastes of trees or plants occurred by felling and grabbing are expected to dispose near

construction site.

A specific organic waste disposal site near the construction site couldn't be confirmed during this study. However, organic waste is expected to be discarded near the construction site; therefore the estimated transportation distance is also less than 5 km.

3.8.4 Retaining Wall and Box Culvert

In Japan, usually "Retaining Wall (Type 1)" specification is used to assert the price; however material cost is estimated by multiplying a rate to labour cost and since the difference between Burmese and Japanese labour cost is more than 10 folds, there is a significant risk to underestimate the retaining wall cost. Therefore, "Retaining Wall (Type 2)" specification – that has a clear and complex breakdown structure – was adopted in this cost estimate. For the same reason, "Box Culvert (Type 2)" was adopted in this cost estimate.

3.8.5 Foundation Works

The construction method adopted is the reverse circulation drill. Since the construction site is limited by two detour roads isn't possible to use two cranes (Method A). Therefore, only one crane (B Method) is expected to be used in the construction.

3.8.6 Abutment and Pier

For the same reasons described in item 3.8.4, "Abutment/Pier (Type 2)" specification – that has a clear and complex breakdown structure – was adopted in this cost estimate.

3.8.7 PC Girder Fabrication

Considering cost and construction period factors, PC girders are expected to be fabricated in the site. PC girder fabrication can be estimated according two standards: "Cost Estimate Standard for Civil Works (MOC), 2000" and "Bridge Erection Works Cost Estimation, 2014". A comparison between both standards using Burmese and Japanese unit rates for labour is shown in Table 3.8-2. In case of the Burmese labour the price difference between the standards is significant, because "Bridge Erection Works Cost Estimation, 2014" estimates steel material cost – rebar, strand, post tension duct etc. – by multiplying a rate to labour cost and since the difference between Burmese and Japanese labour cost is more than 10 folds, there is a significant risk to underestimate the PC girder fabrication cost if the new standard is applied. Therefore, according to JICA Manual, the cost estimation for PC girder fabrication was based on the "Cost Estimate Standard for Civil Works (MOC), 2000". The comparison below is based in the basic design conditions/quantities.

Table 3.8-2 PC Girder Fabrication Cost

Unit: Million JPY/Girder

Standard	Fabrication Cost	
	Myanmar	Japan
Cost Estimate Standard for Civil Works (MOC), 2000	2.20	3.99
Bridge Erection Works Cost Estimation, 2014	1.65	3.68
Reduction Ratio	**-25%**	**-7.7%**

Source: JICA Study Team

3.8.8 Steel Girder Fabrication

Quotation from two companies in South East Asia and the two in Myanmar were used for estimate the steel bridge procurement price. To ensure an appropriate competitive bidding, it was excluded the lowest and highest price (Japan procurement); and the average price of three companies was adopted in this estimation as shown in Table 3.8-3.

Table 3.8-3 Expected Steel Girder Procurement Price

Unit: 100 Million JPY/Steel Bridge (L. Sum)

	A	B	C	D	MLIT
Procurement Price	---	---	---	---	---
Adopted Price	×	**5.27 (Average)**			×

Source: JICA Study Team

3.8.9 PC/Steel Girder Night Time Erection

Night time allowance of 100% based on Table 2.2-1 was considered in this cost estimate for PC/Steel girder erection labour.

3.9 Soft Component

Not applicable in this project.

4. Project Schedule

4 CONSTRUCTION SCHEDULE

Table 4-1 Construction Schedule

Table5-1

Construction Schedule

	Item			Year	2018								2019												2020											
				Month	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
				NO	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
MOC	Preperation																																			
	Temporary Facilities	Leveling for Construction Yard																																		
	Waterway Works																																			
	Diversion of Existing Road																																			
PK3 Contractor	Preperation																																			
	Cast in Place Concrete Pile	Dia 1500mm (n=97、17 site)																																		
	Substructure & Foundation	AF2																																		
		PF15																																		
		PF14																																		
		PF13																																		
		PF12																																		
		PF11																																		
		PF10																																		
		PF9																																		
		PF8																																		
		PF7																																		
		PF6																																		
		PF5																																		
		PF4																																		
		PF3																																		
		PF2																																		
		PF1																																		
		AF1																																		
	Superstructure	PC-I Girder AF 1～PF. 2 PF.5～PF.11 PF.14～AF 2	Fabrication																																	
			Erection																																	
			Cross Beam																																	
			Deck Work																																	
		Steel Girder PF. 2～PF. 5 PF.11～PF.14	Fabrication																																	
			Bent																																	
			Erection																																	
			Deck Work																																	
		Bridge Surface Work																																		
		Installation of accessorie																																		
	Approach Road	Soft Soil Treatment																																		
		Embankment & Concrete Wall																																		
		Embankment & Reinforced Earth Wall																																		
	Road Facilities																																			
	Pavement																																			
	Subsidiary Work																																			
	Cleaning & Demolition																																			

5. Project Cost Estimation

5 PROJECT COST ESTIMATION

Table 5-1

Project Cost Estimation – Summary Table
(Package 3)

Cost Estimate Date/Bidding Date	May 2017
Country	Myanmar
Project Title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Consultant Name	Joint Venture for Detailed Design Study on Bago River Bridge Construction Project
Exchange Rate	1Main (USD)＝113.11円　　1Local (MMK)＝0.0832円

Unit: Thousand

	Total Amount	JPY	Local (MMK)		Main (USD)		Yen Equiv. Sum
	ⓒ+ⓓ	ⓓ	MMK	Yen Conv. ⓐ	USD	Yen Conv. ⓑ	ⓒ=ⓐ+ⓑ
Bago Bridge Project Cost (①+②)	3,853,096	2,119,485	20,836,678	1,733,612			1,733,612
① Japanese Yen Loan Appraised Section	3,076,806	1,991,531	13,044,172	1,085,275			1,085,275
Ⅰ Flyover Section	3,076,806	1,991,531	13,044,172	1,085,275			1,085,275
a Construction Cost	2,633,969	1,756,769	10,543,275	877,200			877,200
b Price Escalation	162,573	53,160	1,315,063	109,413			109,413
c Physical Contigency	279,654	180,993	1,185,834	98,661			98,661
d Interest During Construction	610	610					
e Consultant Service	※Included In Other Package						
② Myanmar Government Fundding Section	776,290	127,954	7,792,507	648,337			648,337
Ⅱ Side Road Section	329,752	127,954	2,425,457	201,798			201,798
a Construction Cost	276,013	112,905	1,960,436	163,108			163,108
b Price Escalation	23,761	3,417	244,525	20,344			20,344
c Physical Contigency	29,977	11,632	220,496	18,345			18,345
Ⅲ Land Acquisition & Compensation							
Ⅳ Project Administration Cost	170,297		2,046,844	170,297			170,297
Ⅴ Commercial Tax	170,297		2,046,844	170,297			170,297
Ⅵ Import Tax	105,944		1,273,362	105,944			105,944

Project Cost Estimation – Summary Table (Per Fiscal Year)
(Package 3)

Unit: Thousand

Scope	FY 2018				FY 2019				FY 2020				Total			
	Local (MMK)	Main (USD)	Yen (JPY)	Yen Conv.	Local (MMK)	Main (USD)	Yen (JPY)	Yen Conv.	Local (MMK)	Main (USD)	Yen (JPY)	Yen Conv.	Local (MMK)	Main (USD)	Yen (JPY)	Yen Conv.
Bago Bridge Project Cost (①+②)	5,718,619		351,061	826,850	11,408,020		1,252,570	2,201,717	3,640,817		477,459	780,375	20,767,457		2,081,090	3,808,943
① Japanese Yen Loan Appraised Section	2,377,783		341,064	538,895	8,318,390		1,252,570	1,944,660	2,347,999		397,897	593,251	13,044,172		1,991,531	3,076,806
Ⅰ Flyover Section	2,377,783		341,064	538,895	8,318,390		1,252,570	1,944,660	2,347,999		397,897	593,251	13,044,172		1,991,531	3,076,806
a Construction Cost	1,921,902		300,904	460,806	6,723,545		1,105,036	1,664,435	1,897,828		350,829	508,728	10,543,275		1,756,769	2,633,969
b Price Escalation	239,719		9,105	29,050	838,628		33,438	103,212	236,716		10,616	30,311	1,315,063		53,160	162,573
c Physical Contigency	216,162		31,001	48,986	756,217		113,847	176,765	213,454		36,145	53,904	1,185,834		180,993	279,654
d Interest During Construction			54	54			248	248			308	308			610	610
e Consultant Service (Included In Other Package)																
② Myanmar Government Fundding Section	3,340,837		9,997	287,955	3,089,631			257,057	1,292,818		79,562	187,124	7,723,286		89,559	732,136
Ⅱ Side Road Section	2,245,666		9,997	196,837					179,791		79,562	94,520	2,425,457		89,559	291,357
a Construction Cost	1,815,115		8,822	159,839					145,320		70,204	82,295	1,960,436		79,026	242,134
b Price Escalation	226,399		267	19,103					18,126		2,124	3,632	244,525		2,391	22,736
c Physical Contigency	204,151		909	17,894					16,345		7,233	8,593	220,496		8,142	26,487
Ⅲ Land Acquisition & Compensation																
Ⅳ Project Administration Cost	442,114			36,784	1,168,517			97,221	413,139			34,373	2,023,770			168,378
Ⅴ Commercial Tax	442,114			36,784	1,168,517			97,221	413,139			34,373	2,023,770			168,378
Ⅵ Import Tax	210,942			17,550	752,597			62,616	286,750			23,858	1,250,289			104,024

Civil Works Construction Costs (Resume)
(Package 3)

Unit: Thousand

Scope	Without Price Escalation			
	Local (MMK)	Main (USD)	Yen (JPY)	Yen Conv.
Civil Works Construction Costs （Ⅰa+Ⅱa)	12,503,711	－	1,869,674	2,909,982
Ⅰa Civil Works Construction Cost (Flyover Section)	10,543,275	－	1,756,769	2,633,969
1 Preparation Works	1,214,301	－	14,780	115,810
2 Foundation	1,371,581	－	93,413	207,529
3 Substructure (Abutment)	122,117	－	2,487	12,647
4 Substructure (Pier)	1,125,365	－	25,016	118,647
5 Superstructure (PC I Girder Bridge)	1,817,762	－	116,154	267,392
6 Superstructure (Steel Plate Girder Bridge)	385,296	－	228,148	260,205
7 Superstructure (Steel Box Bridge)	667,640	－	463,410	518,957
8 Approach Road	1,642,276	－	151,909	288,546
9 Pavement	581,048	－	－	48,343
10 AF.1 Area Ground Improvement	432,913	－	26,512	62,530
11 Material Shipping Cost	－	－	62,198	62,198
12 Safety Related Cost	95,786	－	32,902	40,871
13 Traffic Related Cost	46,175	－	－	3,842
14 Common Indirect Costs	－	－	116,622	116,622
15 Site Indirect Costs	1,041,014	－	262,143	348,756
16 Overhead Costs	－	－	161,075	161,075
Ⅱ Civil Works Construction Cost (Side Road Section)	1,960,436	－	112,905	276,013
1 Site Clearing Works	50,317	－	－	4,186
2 Earthworks	151,322	－	－	12,590
3 Drainage Works	663,429	－	8,822	64,019
4 Pavement Works	950,047	－	－	79,044
5 Road Ancillary Works	145,320	－	34	12,125
6 Eletric Facilities Works	－	－	70,171	70,171

Contruction Cost Comparison

Unit: 1 Million JPY

Scope	FS	DD	Difference
Civil Works Construction Costs （Ⅰa+Ⅱa）	2,264	2,910	646
Ⅰa Civil Works Construction Cost (Flyover Section)	2,120	2,634	514
1 Preparation Works		116	116
2 Foundation	201	208	
3 Substructure (Abutment)	30	13	32
4 Substructure (Pier)	77	119	
5 Superstructure (PC I Girder Bridge)	344	267	
6 Superstructure (Steel Plate Girder Bridge)	578	260	124
7 Superstructure (Steel Box Bridge)		519	
8 Approach Road	494	289	-205
9 Pavement	19	48	29
10 AF.1 Area Ground Improvement		63	63
11 Material Shipping Cost		62	
12 Safety Related Cost		41	
13 Traffic Related Cost		4	356
14 Common Indirect Costs			
15 Site Indirect Costs	377	626	
16 Overhead Costs			
Ⅱ Civil Works Construction Cost (Side Road Section)	145	276	131
1 Site Clearing Works		4	4
2 Earthworks	20	13	-7
3 Drainage Works		64	64
4 Pavement Works	125	79	-46
5 Road Ancillary Works		12	12
6 Eletric Facilities Works		70	70

Table 5-4

Exchange Rate Calculation Table

● Adopted Exchange Rate

1 USD =	113.11 JPY
1 USD =	1,358 MMK
1 MMK =	0.0832 JPY

● 1 USD → JPY Exchange Rate TTS Calculation Table

Day	2017		
	Feb	Mar	Apr
1	114.08	114.17	
2	114.07	115.00	
3	113.98	115.23	112.27
4			111.60
5			111.77
6	113.37	114.78	111.56
7	112.75	114.98	111.93
8	113.45	114.91	
9	113.06	115.60	
10	114.74	116.22	112.43
11			111.83
12			110.58
13	114.96	115.82	109.83
14	114.69	115.86	110.22
15	115.50	115.83	
16	115.11	114.28	
17	114.47	114.48	109.29
18			110.19
19			109.56
20	113.88		110.05
21	114.43	113.40	110.31
22	114.66	112.72	
23	114.37	112.48	
24	113.86	112.35	110.96
25			110.93
26			112.33
27	113.18	111.44	112.35
28	113.56	111.77	112.29
29		112.05	
30		112.37	
31		113.19	
Subtotal	2,282.17	2,508.93	2,222.28
Business Days	20	22	20
Total			7,013.38
Total B. Days			62
Average	http://www.murc-kawasesouba.jp/fx/past_3month.php		113.11

※Source: Bank of Tokyo-Mitsubishi UFJ

● 1 USD → MMK Exchange Rate Calculation Table

Day	2017		
	Feb	Mar	Apr
1	1,350	1,357	
2	1,350		
3	1,350	1,357	1,362
4			1,360
5			1,358
6	1,350	1,357	1,358
7	1,355	1,357	1,360
8	1,360	1,357	
9	1,360	1,360	
10	1,360	1,362	1,360
11			1,360
12			1,359
13	1,360	1,362	
14	1,360	1,362	
15	1,360	1,362	
16	1,358	1,362	
17	1,358	1,362	
18			1,359
19			1,356
20	1,358	1,362	1,354
21	1,360	1,362	1,352
22	1,360	1,362	
23	1,360	1,362	
24	1,360	1,362	1,352
25			1,352
26			1,355
27	1,360		1,358
28	1,360	1,362	1,358
29		1,362	
30		1,362	
31		1,362	
Subtotal	27,149	28,575	23,073
Business Days	20	21	17
Total			78,797
Total B. Days			58
Average	http://forex.cbm.gov.mm/index.php/fxrate/history		1,358

※Source: Central Bank of Myanmar

6. Construction Cost Estimation

6 CONSTRUCTION COST ESTIMATION

Table 6-1

Civil Works Construction Costs Breakdown

Cost Estimate Date/Bidding Date	Nov/2016・Dec/2018
Country	Myanmar
Project Title	Detailed Design Study on Bago River Bridge Construction Project
Project Type	Bridge
Exchange Rate	1Main (USD)＝113.11円　　1Local (MMK)＝0.0832円

	Category	Item	Specification	Unit	Quantity	Local (MMK)		Main (USD)		Yen (JPY)		Yen Conv.	Item Conditions	BOQ No.
						Unit Price	Subtotal	Unit Price	Subtotal	Unit Price	Subtotal			
Civil Works Construction Costs （Ⅰa+Ⅱa)							**12,503,710,673**				**1,869,673,644**	**2,909,982,372**		
Ⅰa Civil Works Construction Cost (Flyover Section)							**10,543,275,167**				**1,756,768,668**	**2,633,969,162**		
1 Preparation Works							1,214,300,931				14,780,000	115,809,837		
	Site Preparation	Site Clearing Works	Less than 50 trees/100 m2	m2	10,000.00	932	9,320,000					775,424	ITEM-104	
	Ground Improvement	Backhoe Mixing Stabilization Works	Cement 60 kg/m3	m3	10,000.00	13,241	132,410,000					11,016,512	ITEM-31	01110-01
	Earthworks	Subgrade Preparation Works		m2	10,000.00	703	7,030,000					584,896	ITEM-107	'01150
		Road Bed Construction Works	Material From Borrow Pit	m3	10,000.00	19,883	198,830,000					16,542,656	ITEM-28	'01150
		Subgrade Construction Works	Material From Borrow Pit	m3	10,000.00	20,444	204,440,000					17,009,408	ITEM-30	'01150
		Demolition Works	Unreinf. Conc. Structure (Including Disposal)	m3	218.00	14,328	3,123,504					259,876	ITEM-40	02200-01
		Asphalt Pav. Removal Works	t≤10cm / Backhoe 0.45m3	m3	1,687.00	465	784,455					65,267	ITEM-127	
		Site Clearing Works	Less than 50 trees/100 m2	m2	427.00	932	397,964					33,111	ITEM-104	
	Temporary Pavement	Concrete Pavement	Co 20/20cm	m2	10,000.00	37,911	379,110,000			1,478	14,780,000	46,321,952	ITEM-106	'01150
		Waterwell	30 ℓ/s	no	2.00	16,525,502	33,051,004					2,749,844	QTN-9	'01150
		Waterwell	60 ℓ/s	no	2.00	18,902,002	37,804,004					3,145,293	QTN-10	'01150
	Relocation works	Assist Utility Authorities		P.Sum	1.00	39,800,000	39,800,000					3,311,360	JICA Study Team	01700-01
		As Req. by Utility Authority or Engineer		P.Sum	1.00	139,300,000	139,300,000					11,589,760	JICA Study Team	
		Road Reinstatement	As Directed by Engineer	P.Sum	1.00	19,900,000	19,900,000					1,655,680	JICA Study Team	'01150
	Others	Project Sign Board		L.Sum	1.00	9,000,000	9,000,000					748,800	ITEM-24	01100-02
2 Foundation							1,371,581,302				93,413,188	207,528,752		
	Pile Cast in Situ	AF.1	L=40.5m	no	8.00	13,138,137	105,105,096			621,757	4,974,056	13,718,800	ITEM-62	
	(RCD Pile / Φ1500 mm)	PF.1	L=41.5m	no	6.00	13,357,420	80,144,520			628,289	3,769,734	10,437,758	ITEM-63	
		PF.2	L=41.5m	no	6.00	13,357,420	80,144,520			628,289	3,769,734	10,437,758	ITEM-64	
		PF.3	L=38.0m	no	9.00	12,352,018	111,168,162			520,709	4,686,381	13,935,572	ITEM-65	
		PF.4	L=40.5m	no	6.00	12,898,329	77,389,974			537,522	3,225,132	9,663,978	ITEM-66	
		PF.5	L=35.5m	no	6.00	11,338,928	68,033,568			557,487	3,344,922	9,005,315	ITEM-67	
		PF.6	L=33.5m	no	6.00	10,897,039	65,382,234			543,049	3,258,294	8,698,096	ITEM-68	
		PF.7	L=37.0m	no	4.00	11,486,173	45,944,692			461,934	1,847,736	5,670,334	ITEM-69	
		PF.8	L=37.0m	no	6.00	11,672,834	70,037,004			568,995	3,413,970	9,241,049	ITEM-70	
		PF.9	L=35.5m	no	6.00	11,233,270	67,399,620			510,332	3,061,992	8,669,640	ITEM-71	
		PF.10	L=32.5m	no	6.00	10,674,909	64,049,454			535,791	3,214,746	8,543,661	ITEM-72	
		PF.11	L=32.5m	no	4.00	10,470,210	41,880,840			460,508	1,842,032	5,326,518	ITEM-73	
		PF.12	L=33.0m	no	4.00	10,580,355	42,321,420			463,653	1,854,612	5,375,754	ITEM-74	
		PF.13	L=32.5m	no	4.00	10,470,210	41,880,840			460,508	1,842,032	5,326,518	ITEM-75	
		PF.14	L=33.5m	no	4.00	10,866,587	43,466,348			524,365	2,097,460	5,713,860	ITEM-76	
		PF.15	L=34.0m	no	6.00	10,794,865	64,769,190			469,217	2,815,302	8,204,099	ITEM-77	
		AF.2	L=34.0m	no	6.00	10,884,893	65,309,358			495,047	2,970,282	8,404,021	ITEM-78	
		Foundation Works Equip.	Japanese Procurement	no	97.00					416,291	40,380,191	40,380,191	ITEM-25	
		Test Cost	Ultrasonic Test	times	97.00	645,316	62,595,652					5,207,958	QTN-17	
		Test Cost	Static Loading Test	place	1.00	62,781,830	62,781,830			1,044,580	1,044,580	6,268,028	ITEM-79	
		Test Cost	Geotechnical Test (Foundation)	P.Sum	1.00	111,776,980	111,776,980					9,299,845	QTN-13	01950-01
3 Substructure (Abutment)							122,117,424				2,486,809	12,646,979		
	Abutment Works	H Pile Driving /Removal Works	Vibrohammer 60kW / H-300	no	18.00	76,898	1,384,164					115,162	ITEM-96	
		Lagging Works	Install & Removal	m2	85.00	5,832	495,720					41,244	ITEM-97	
		Temp. Constr. Material	Temp. Ret. Wall (Substructure)	place	1.00	4,867,438	4,867,438					404,971	ITEM-98	
		Backhoe Excavation	0.8m3	m3	614.50	2,801	1,721,215					143,205	ITEM-33	
		Excavation Auxiliary Labour	Base Adjusting	m2	179.70	61	10,926					909	ITEM-34	
		Backfilling Type C		m3	257.40	5,166	1,329,728					110,633	ITEM-36	
		Surplus Transport	Sand Soil	m3	328.50	4,674	1,535,409					127,746	ITEM-38	
		Crush Stone Base Works	t=20cm	m2	179.70	14,270	2,564,319					213,351	ITEM-47	
		Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	18.00	104,911	1,888,398					157,115	ITEM-84	
		Formworks	For Levelling Concrete	m2	8.40	8,298	69,703					5,799	ITEM-94	
		Abutment & Pier (Type 2)	24 N/mm2	m3	695.90	101,403	70,566,348					5,871,120	ITEM-128	
		Rebar Works	Less or equal to Φ13	t	1.398	279,905	391,307			62,640	87,571	120,128	ITEM-80	
		Rebar Works	Φ16～Φ25	t	26.496	237,219	6,285,355			60,480	1,602,478	2,125,420	ITEM-81	
		Rebar Works	Φ29～Φ32	t	9.512	144,987	1,379,116			61,560	585,559	700,301	ITEM-82	
		Formworks	General Type	m2	777.10	16,268	12,641,863					1,051,803	ITEM-91	
		Formworks	Cylindrical Type	m2	8.40	21,698	182,263					15,164	ITEM-93	
		Non-shrink Grout	Premix Cement Type	m3	0.42	2,850,050	1,197,021					99,592	ITEM-154	
		Scaffolding Works	Handrail Assembling Type	m2	556.00	11,247	6,253,332					520,277	ITEM-100	
		Falsework	Pipe Support Type	m3	15.00	7,823	117,345					9,763	ITEM-101	
		Falsework	Wedge Connection Type	m3	65.00	7,343	477,295					39,711	ITEM-102	
	Approach Slab	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	18.90	110,086	2,080,625					173,108	ITEM-86	
	(※AF.1 Side Calculated in Separated)	Rebar Works	Less or equal to Φ13	t	0.722	279,905	202,091			62,640	45,226	62,040	ITEM-80	
		Rebar Works	Φ16～Φ25	t	0.589	237,219	139,722			60,480	35,623	47,248	ITEM-81	
		Rebar Works	Φ29～Φ32	t	1.413	144,987	204,867			61,560	86,984	104,029	ITEM-82	
		Formworks	General Type	m2	7.30	16,268	118,756					9,880	ITEM-91	
	Bridge Drainage Works	Water Collector Install	600×600×1100	no	2.00	471,539	943,078			3,577	7,154	85,618	ITEM-210	
		Pipe Culvert (Φ300mm)	Type A	m	38.00	80,790	3,070,020			953	36,214	291,640	ITEM-213	
4 Substructure (Pier)							1,125,365,335				25,016,317	118,646,713		
	Pier Works	H Pile Driving /Removal Works	Vibrohammer 60kW / H-300	no	152.00	76,898	11,688,496					972,483	ITEM-96	
		Lagging Works	Install & Removal	m2	706.80	5,832	4,122,058					342,955	ITEM-97	
		Temp. Constr. Material	Temp. Ret. Wall (Substructure)	place	8.00	4,867,438	38,939,508					3,239,767	ITEM-98	
		Backhoe Excavation	0.8m3	m3	5,448.50	2,801	15,261,249					1,269,736	ITEM-33	
		Excavation Auxiliary Labour	Base Adjusting	m2	995.20	61	60,508					5,034	ITEM-34	
		Backfilling Type C		m3	2,822.20	5,166	14,579,485					1,213,013	ITEM-36	
		Surplus Transport	Sand Soil	m3	2,312.60	4,674	10,809,092					899,316	ITEM-38	
		Crush Stone Base Works	t=20cm	m2	995.20	14,270	14,201,504					1,181,565	ITEM-47	
		Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	99.80	104,911	10,470,118					871,114	ITEM-84	
		Formworks	For Levelling Concrete	m2	52.50	8,298	435,645					36,246	ITEM-94	
		Abutment & Pier (Type 2)	24 N/mm2	m3	4,432.00	101,403	449,418,096					37,391,586	ITEM-128	
		Rebar Works	Φ16～Φ25	t	182.527	237,219	43,298,872			60,480	11,039,233	14,641,699	ITEM-81	
		Rebar Works	Φ29～Φ32	t	212.353	144,987	30,788,424			61,560	13,072,451	15,634,048	ITEM-82	
		Formworks	General Type	m2	2,219.20	16,268	36,101,946					3,003,682	ITEM-91	
		Formworks	Cylindrical Type	m2	116.10	21,698	2,519,138					209,592	ITEM-93	
		Formworks	Metallic Type	no	4.00	64,591,252	258,365,008					21,495,969	ITEM-95	
		Non-shrink Grout	Premix Cement Type	m3	16.28	2,850,050	46,398,814					3,860,381	ITEM-154	
		Scaffolding Works	Handrail Assembling Type	m2	4,478.00	11,247	50,364,066					4,190,290	ITEM-100	
		Falsework	Wedge Connection Type	m3	1,136.00	7,343	8,341,648					694,025	ITEM-102	
	Bridge Drainage Works	Drainage Material	Subtructure	t	0.912	48,082,966	43,851,665			599,452	546,700	4,195,159	ITEM-194	
		Concrete Anchor Bolt Installation Works		no	608.00	1,376	836,608			3.6	2,177	71,783	ITEM-202	
		Drainage Pipe Installation	PVC Pipe	m	407.00	4,496	1,829,872					152,245	ITEM-203	
		Water Collector Install	600×600×1100	no	15.00	471,539	7,073,085			3,577.0	53,655	642,136	ITEM-210	
		Pipe Culvert (Φ300mm)	Type A	m	317.00	80,790	25,610,430			953	302,101	2,432,889	ITEM-213	
5 Superstructure (PC I Girder Bridge)							1,817,761,719				116,154,125	267,391,900		
	Post Tension Gider Fabrication	Concrete	40N/mm2 (PC Girder)	m3	1,167.30	159,752	186,478,510			972	1,134,616	16,649,628	ITEM-132	
		Rebar Install	D10～D13 (PC Girder)	t	63.782	348,310	22,215,908			62,640	3,995,304	5,843,668	ITEM-129	
		Rebar Install	D16～D25 (PC Girder)	t	112.430	348,310	39,160,493			60,480	6,799,766	10,057,919	ITEM-130	
		PC Cable Install	7S15.2 (SWPR7BL)	m	5,897.30	7,449	43,928,988			3,147	18,558,803	22,213,695	ITEM-131	
		Prestressing Works	130t	cable	200.00	80,234	16,046,800			32,000	6,400,000	7,735,094	ITEM-133	
		Temporary Storage		no	40.00	378,544	15,141,760					1,259,794	ITEM-134	
		Equipment Rent. Install & Removal	Post Tension Girder	L.Sum	1.00	310,864,904	310,864,904					25,863,960	ITEM-135	
	PC Girder Erection Works	PC Girder Erection	Truck Crane Erection Method	no	40.00	1,277,811	51,112,440					4,252,555	ITEM-140	
		Girder Transportation (Short Distance)	Heavy Load Vehicle	no	40.00	582,162	23,286,480					1,937,435	ITEM-141	
		Night Time Construction (Allowance)	PC Girder	no	40.00	545,390	21,815,600					1,815,058	ITEM-142	
	Girder Continuity Works	Concrete Works	30N/mm2 (Cross Girder)	m3	220.60	263,676	58,166,926					4,839,488	ITEM-145	
		Rebar Works	D10～D13	t	1.191	313,766	373,695			62,640	74,604	105,695	ITEM-143	
		Rebar Works	D16～D25	t	37.652	313,766	11,813,917			60,480	2,277,193	3,260,111	ITEM-144	
	Slab Works (Precast)	Temporary Storage	For PC Precast Panels	no	852.00	6,594	5,618,088					467,425	ITEM-150	
		PC Precast Panels Installation Works		no	852.00	305,229	260,055,108					21,636,585	ITEM-151	
		PC Precast Panels Sealing Works		m (both sides)	838.80	20,846	17,485,625					1,454,804	ITEM-149	

	RC Precast Panels Joint Works		m	83.77	2,533	212,189					17,654	ITEM-152	
	Scaffolding Works	Handrail Assembling Type	m2	3,360.00	11,247	37,789,920					3,144,121	ITEM-100	
Slab Works (Cast in Situ)	Struc. Concrete	30N/mm2 (Bridge Slab)	m3	693.50	123,328	85,527,968					7,115,927	ITEM-88	
	Rebar Works	Less or equal to Φ13	t	8.412	279,905	2,354,561			62,640	526,928	722,827	ITEM-80	
	Rebar Works	Φ16～Φ25	t	267.635	237,219	63,488,107			60,480	16,186,565	21,468,776	ITEM-81	
	Formworks	PC Slab (Border/Hanging Portion)	m2	497.00	41,393	20,572,321					1,711,617	ITEM-153	
Cross Girder Works (Cast in Situ)	Concrete Works	30N/mm2 (Cross Girder)	m3	156.50	263,676	41,265,294					3,433,272	ITEM-145	
	Rebar Works	D10～D13	t	2.964	313,766	930,002			62,640	185,665	263,041	ITEM-143	
	Rebar Works	D16～D25	t	6.490	313,766	2,036,341			60,480	392,515	561,939	ITEM-144	
	PC Cable Installation Works	4S15.2 (SWPR7BL)	m	1,456.50	4,014	5,846,391			1,529	2,226,989	2,713,409	ITEM-146	
	Prestressing Works	700kN (70t)	cable	260.00	21,433	5,572,580			38,900	10,114,000	10,577,639	ITEM-147	
	Equipment Rental/Depreciation	For Cross Girder Works	L.Sum	1.00	1,020,430	1,020,430					84,900	ITEM-148	
Bearings Installation Works	Elastomeric Bearing Pad	92×470×520	no	60.00	112,066	6,723,960			191,000	11,460,000	12,019,433	ITEM-182	
	Elastomeric Bearing Pad	112×520×520	no	20.00	112,066	2,241,320			254,000	5,080,000	5,266,478	ITEM-183	
Bridge Mov. Restraint	Anchor Bar Works		kg	4,319.40	1,796	7,756,652			3,701	15,984,931	16,630,284	ITEM-184	
Exp. Joints Installation Works	Expansion Joint Installation Works	Joint Type 80mm	m	11.50	41,331	475,307			300,670	3,457,705	3,497,251	ITEM-188	
	Expansion Joint Installation Works	Joint Type 110mm	m	11.50	41,331	475,307			396,426	4,558,899	4,598,445	ITEM-189	
Bridge Parapets Works	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	310.00	110,086	34,126,660					2,839,338	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	21.763	279,905	6,091,573			62,640	1,363,234	1,870,053	ITEM-80	
	Rebar Works	Φ16～Φ25	t	22.949	237,219	5,443,939			60,480	1,387,956	1,840,892	ITEM-81	
	Formworks	General Type	m2	1,593.00	16,268	25,914,924					2,156,122	ITEM-91	
Bridge Surface Works	Deck Waterproof Works		m2	3,293.50	46,158	152,021,373					12,648,178	ITEM-193	
	Concrete Surface Adjust	18N/mm2 / Conc. Pump Cast	m3	176.20	105,621	18,610,420					1,548,387	ITEM-85	
Bridge Drainage Works	Drainage Material	PC Girder	t	6.194	14,627,084	90,600,161			640,565	3,967,662	11,505,595	ITEM-196	
	Concrete Anchor Bolt Installation Works		no	208.00	1,376	286,208			3.6	745	24,558	ITEM-202	
	Drainage Pipe Installation	PVC Pipe	m	459.30	4,496	2,065,013					171,809	ITEM-203	
	New Table		place	60.00	11,745	704,700					58,631	ITEM-209	
Lighting Pedestal	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	3.68	110,086	405,116					33,706	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	0.320	279,905	89,570			62,640	20,045	27,497	ITEM-80	
	Formworks	General Type	m2	20.82	16,268	338,700					28,180	ITEM-91	
Space Under Girder	Fence Installation	Wire Mesh Fence	m	744.00	82,071	61,060,824					5,080,261	ITEM-204	
	Fence Installation	Wire Mesh Gate	no	11.00	4,740,786	52,148,646					4,338,767	ITEM-205	
Concrete Seal	Struc. Concrete (General Struc.)	18N/mm2 / Conc. Pump Cast	m3		105,621							ITEM-85	
	Rebar Works	Less or equal to Φ13	t		279,905				62,640			ITEM-80	
	Crush Stone Base Works	t=15cm	m2		11,480							ITEM-46	
6 Superstructure (Steel Plate Girder Bridge)						385,296,420				228,147,953	260,204,615		
Steel Gider Fabrication	Steel Girder Fabrication	Plate Girder	t	362.088					451,585	163,513,509	163,513,509	QTN-11	
Steel Gider Erection	Bent Foundation Install & Removal	Plate Girder	m2	120.40	26,364	3,174,200					264,093	ITEM-155	
	Bent Install & Removal	Plate Girder	t	79.60	743,790	59,205,657					4,925,911	ITEM-156	
	Scaffolding Works	Plate Girder	L.Sum	1.00	11,048,717	11,048,717					919,253	ITEM-157	
	Anti Falling. Obj. Net & Temp. Access	Plate Girder	L.Sum	1.00	1,321,584	1,321,584					109,956	ITEM-158	
	In Situ Assembly Works	Plate Girder	t	282.720	20,108	5,684,834					472,978	ITEM-159	
	Erection Works	Plate Girder	t	371.400	20,205	7,504,078					624,339	ITEM-160	
	Bolt Tightening Works	Plate Girder	no	17,944.00	324	5,818,822					484,126	ITEM-161	
	Erection Equipments Cost	Plate Girder	L.Sum	1.00	48,917,798	48,917,798					4,069,961	ITEM-162	
	Night Time Construction (Allowance)	Plate Girder	t	371.400	35,021	13,006,707					1,082,158	ITEM-163	
Slab Works (Cast in Situ)	Struc. Concrete	24N/mm2 (Bridge Slab)	m3	420.50	113,737	47,826,409					3,979,157	ITEM-87	
	Rebar Works	Less or equal to Φ13	t	3.807	279,905	1,065,598			62,640	238,470	327,128	ITEM-80	
	Rebar Works	Φ16～Φ25	t	85.202	237,219	20,211,533			60,480	5,153,017	6,834,617	ITEM-81	
	Formworks	General Type	m2	1,264.20	16,268	20,566,006					1,711,092	ITEM-91	
Steel Coating Works (In Situ)	In Situ Coating	F-11 (Outward Surface)	m2	282.50	6,647	1,877,778			2,318	654,835	811,066	ITEM-174	
	In Situ Coating	F-11 (Extra Protection Layer)	m2	58.40	8,775	512,460			3,761	219,642	262,279	ITEM-175	
	In Situ Coating	Zinc Rich Paint (In Situ Coating Portion)	m2	27.30	2,391	65,274			650	17,745	23,176	ITEM-177	
Bearings Installation Works	Elastomeric Bearing Pad	134×470×470	no	10.00	78,957	789,570			1,175,000	11,750,000	11,815,692	ITEM-178	
	Elastomeric Bearing Pad	170×670×670	no	10.00	261,297	2,612,970			2,750,000	27,500,000	27,717,399	ITEM-179	
Exp. Joints Installation Works	Expansion Joint Installation Works	Joint Type 160mm	m	11.50	41,331	475,307			596,252	6,856,898	6,896,444	ITEM-190	
	Expansion Joint Installation Works	Joint Type 230mm	m	11.50	41,331	475,307			831,478	9,561,997	9,601,543	ITEM-191	
Bridge Parapets Works	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	114.40	110,086	12,593,838					1,047,807	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	8.510	279,905	2,381,992			62,640	533,066	731,248	ITEM-80	
	Rebar Works	Φ16～Φ25	t	9.260	237,219	2,196,648			60,480	560,045	742,806	ITEM-81	
	Formworks	General Type	m2	611.10	16,268	9,941,375					827,122	ITEM-91	
Bridge Surface Works	Deck Waterproof Works		m2	1,340.90	46,158	61,893,262					5,149,519	ITEM-193	
Bridge Drainage Works	Drainage Material	Plate Girder	t	2.958	14,429,810	42,683,377			534,554	1,581,212	5,132,469	ITEM-198	
	Drainage Pipe Installation	PVC Pipe	m	220.60	4,496	991,818					82,519	ITEM-203	
	New Table		place	12.00	11,745	140,940					11,726	ITEM-209	
Lighting Pedestal	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	1.38	110,086	151,919					12,640	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	0.120	279,905	33,589			62,640	7,517	10,312	ITEM-80	
	Formworks	General Type	m2	7.81	16,268	127,053					10,571	ITEM-91	
7 Superstructure (Steel Box Bridge)						667,639,544				463,409,697	518,957,307		
Steel Gider Fabrication	Steel Girder Fabrication	Box Girder	t	736.386					494,348	364,030,946	364,030,946	QTN-12	
Steel Gider Erection	Bent Foundation Install & Removal	Box Girder	m2	233.10	32,969	7,685,048					639,396	ITEM-164	
	Bent Install & Removal	Box Girder	t	147.600	1,053,190	155,450,778					12,933,505	ITEM-165	
	Scaffolding Works	Box Girder	L.Sum	1.00	16,301,385	16,301,385					1,356,275	ITEM-166	
	Anti Falling. Obj. Net & Temp. Access	Box Girder	L.Sum	1.00	1,321,584	1,321,584					109,956	ITEM-167	
	In Situ Assembly Works	Box Girder	t	563.200	13,915	7,836,746					652,017	ITEM-168	
	Erection Works	Box Girder	t	759.816	12,047	9,153,618					761,581	ITEM-169	
	Bolt Tightening Works	Box Girder	no	43,766.00	319	13,971,754					1,162,450	ITEM-170	
	Erection Equipments Cost	Box Girder	L.Sum	1.00	111,079,114	111,079,114					9,241,782	ITEM-171	
	Night Time Construction (Allowance)	Box Girder	t	759.816	29,183	22,174,078					1,844,883	ITEM-172	
Slab Works (Cast in Situ)	Struc. Concrete	24N/mm2 (Bridge Slab)	m3	548.20	113,737	62,350,623					5,187,572	ITEM-87	
	Rebar Works	Less or equal to Φ13	t	6.595	279,905	1,845,973			62,640	413,111	566,696	ITEM-80	
	Rebar Works	Φ16～Φ25	t	134.487	237,219	31,902,872			60,480	8,133,774	10,788,093	ITEM-81	
	Formworks	General Type	m2	2,098.00	16,268	34,130,264					2,839,638	ITEM-91	
Steel Coating Works (In Situ)	In Situ Coating	F-11 (Outward Surface)	m2	360.20	6,647	2,394,249			2,318	834,944	1,034,146	ITEM-174	
	In Situ Coating	F-11 (Extra Protection Layer)	m2	91.60	8,775	803,790			3,761	344,508	411,383	ITEM-175	
	In Situ Coating	F-12 (Inward Surface)	m2	488.30	6,116	2,986,443			1,608	785,186	1,033,658	ITEM-176	
	In Situ Coating	Zinc Rich Paint (In Situ Coating Portion)	m2	22.90	2,391	54,754			650	14,885	19,441	ITEM-177	
Bearings Installation Works	Elastomeric Bearing Pad	219×770×720	no	4.00	151,395	605,580			3,900,000	15,600,000	15,650,384	ITEM-180	
	Elastomeric Bearing Pad	314×1070×1070	no	4.00	384,658	1,538,632			11,561,000	46,244,000	46,372,014	ITEM-181	
Exp. Joints Installation Works	Expansion Joint Installation Works	Joint Type 320mm	m	23.00	41,331	950,613			1,040,739	23,936,997	24,016,088	ITEM-192	
Bridge Parapets Works	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	168.80	110,086	18,582,517					1,546,065	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	12.483	279,905	3,494,054			62,640	781,935	1,072,640	ITEM-80	
	Rebar Works	Φ16～Φ25	t	13.166	237,219	3,123,225			60,480	796,280	1,056,132	ITEM-81	
	Formworks	General Type	m2	900.50	16,268	14,649,334					1,218,825	ITEM-91	
Bridge Surface Works	Deck Waterproof Works		m2	1,977.80	46,158	91,291,292					7,595,435	ITEM-193	
Bridge Drainage Works	Drainage Material	Box Girder	t	2.663	18,977,294	50,536,534			556,932	1,483,109	5,687,749	ITEM-200	
	Drainage Pipe Installation	PVC Pipe	m	203.30	4,496	914,037					76,048	ITEM-203	
	New Table		place	8.00	11,745	93,960					7,817	ITEM-209	
Lighting Pedestal	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	1.84	110,086	202,558					16,853	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	0.160	279,905	44,785			62,640	10,022	13,748	ITEM-80	
	Formworks	General Type	m2	10.41	16,268	169,350					14,090	ITEM-91	
8 Approach Road						1,642,276,341				151,909,019	288,546,411		
Ground Improvement	CDM-Mega Method	L_1=3.8m / L=4.4m	no	168.00	303,620	51,008,160			19,540	3,282,720	7,526,599	ITEM-55	
	CDM-Mega Method	L_1=4.0m / L=4.6m	no	378.00	318,786	120,501,108			19,540	7,386,120	17,411,812	ITEM-56	
	CDM-Mega Method	L_1=11.3m / L=12.0m	no	204.00	884,770	180,493,080			34,500	7,038,000	22,055,024	ITEM-57	
	CDM-Mega Method	L_1=11.8m / L=12.5m	no	399.00	922,737	368,172,063			34,500	13,765,500	44,397,416	ITEM-58	
	Licence Fee	CDM－Mega Method	m3	19,885.45					30	596,564	596,564	STD-7	
	Ground Improv. Works Equip.	Japanese Procurement	no	1,149.00					54,599	62,733,788	62,733,788	ITEM-26	
	Test Cost	Geotechnical Test (Approach Road)	P.Sum	1.00	17,834,166	17,834,166					1,483,803	QTN-14	01950-02
Mechanically Stabilized Earth Wall	Backhoe Excavation	0.8m3	m3	2,263.90	2,801	6,341,184					527,587	ITEM-33	03100-01
	Road Bed Construction Works	Material From Borrow Pit	m3	4,630.40	19,883	92,066,243					7,659,911	ITEM-28	03400-02
	Subgrade Construction Works	Material From Borrow Pit	m3	685.00	20,444	14,004,140					1,165,144	ITEM-30	03400-01
	Backfilling Type D		m3	82.40	5,035	414,884					34,518	ITEM-37	03100-01
	Surplus Transport	Sand Soil	m3	2,424.60	4,674	11,332,580					942,871	ITEM-38	03100-02
	Precast Panels Installation Works	Mechanically Stabilized Earth Wall (Type 1)	m2	823.44	270,816	223,000,727			1,902	1,566,183	20,119,843	ITEM-52	03500-01
	Reinf. Strips Installation Works	Mechanically Stabilized Earth Wall (Type 1)	m	7,700.00	113	870,100			1,370	10,549,000	10,621,392	ITEM-53	
	Fill, Level & Compaction Works	Mechanically Stabilized Earth Wall (Type 1)	m3	668.20	4,255	2,843,191					236,553	ITEM-54	
	Reinf. Wall Backfilling	Filter Material Installing Works	m3	668.20	12,610	8,426,002					701,043	ITEM-43	
	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	48.16	110,086	5,301,742					441,105	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	3.049	279,905	853,430			62,640	190,989	261,994	ITEM-80	
	Formworks	General Type	m2	317.22	16,268	5,160,535					429,357	ITEM-91	

	Scaffolding Works	Catwalk Type	m	228.22	5,064	1,155,706					96,155	ITEM-105	
	Struc. Concrete (General Struc.)	18N/mm2 / Conc. Pump Cast	m3	18.26	105,621	1,928,639					160,463	ITEM-85	
	Rebar Works	Less or equal to Φ13	t	0.122	279,905	34,148			62,640	7,642	10,483	ITEM-80	
	Formworks	General Type	m2	91.32	16,268	1,485,594					123,601	ITEM-91	
	Crush Stone Base Works		m3	767.00	68,709	52,699,803					4,384,624	ITEM-48	
	Geotextile Installation		m2	913.20	41,649	38,033,867					3,164,418	ITEM-51	
L Shape Retaning Wall	Backhoe Excavation	0.8m3	m3	1,628.60	2,801	4,561,709					379,534	ITEM-33	
	Road Bed Construction Works	Material From Borrow Pit	m3	602.20	19,883	11,973,543					996,199	ITEM-28	
	Subgrade Construction Works	Material From Borrow Pit	m3	1,078.60	20,444	22,050,898					1,834,635	ITEM-30	
	Backfilling Type D		m3	132.40	5,035	666,634					55,464	ITEM-37	
	Surplus Transport	Sand Soil	m3	1,688.20	4,674	7,890,647					656,502	ITEM-38	
	Retaining Wall (Type 2)	24N/mm2	m3	327.77	107,514	35,239,864					2,931,957	ITEM-49	03500-01
	Rebar Works	Less or equal to Φ13	t	13.254	279,905	3,709,861			62,640	830,231	1,138,891	ITEM-80	
	Rebar Works	Φ16～Φ25	t	2.450	237,219	581,187			60,480	148,176	196,531	ITEM-81	
	Formworks	General Type	m2	846.64	16,268	13,773,140					1,145,925	ITEM-91	
	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	46.02	104,911	4,828,004					401,690	ITEM-84	
	Formworks	For Levelling Concrete	m2	46.98	8,298	389,840					32,435	ITEM-94	
	Scaffolding Works	Handrail Assembling Type	m2	607.42	11,247	6,831,653					568,394	ITEM-100	
Road Traffic Barrier Works	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	293.72	110,086	32,334,460					2,690,227	ITEM-86	
(Mec. Stab. Earth Wall)	Rebar Works	Less or equal to Φ13	t	17.208	279,905	4,816,605			62,640	1,077,909	1,478,651	ITEM-80	
	Formworks	General Type	m2	987.64	16,268	16,066,928					1,336,768	ITEM-91	
	Struc. Concrete (General Struc.)	18N/mm2 / Conc. Pump Cast	m3	28.52	105,621	3,012,311					250,624	ITEM-85	
	Formworks	For Levelling Concrete	m2	23.08	8,298	191,518					15,934	ITEM-94	
	Crush Stone Base Works		m3	188.28	68,709	12,936,531					1,076,319	ITEM-48	
Road Traffic Barrier Works	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	61.18	110,086	6,735,061					560,357	ITEM-86	
(L Shape Ret. Wall)	Rebar Works	Less or equal to Φ13	t	5.496	279,905	1,538,358			62,640	344,269	472,260	ITEM-80	
	Formworks	General Type	m2	421.92	16,268	6,863,795					571,068	ITEM-91	
	Guard Rail Installation	Box Beam	m	25.00	163,508	4,087,700					340,097	ITEM-119	
Drainage Works	Water Collector Install	Type A	no	14.00	320,121	4,481,694			702	9,828	382,705	ITEM-211	
	Water Collector Install	Type B	no	0.00	731,323				2,687			ITEM-212	
	U-Type Side Gutter Install	500×850 (With Cover)	m	37.00	174,598	6,460,126			2,127	78,699	616,181	ITEM-219	
	U-Type Side Gutter Install	300×300	m	81.00	51,550	4,175,550					347,406	ITEM-236	
	U-Type Side Gutter Install	300×300 TYPE V	m	82.00	55,013	4,511,066					375,321	ITEM-237	
	Water Collector Install	600×600×500	no	14.00	314,260	4,399,640			539	7,546	373,596	ITEM-238	
	Water Collector Install	600×600×1200	no	0.00	222,995				645			ITEM-239	
	Pipe Culvert (Φ300mm)	Type B	m	385.00	66,842	25,734,170			953	366,905	2,507,988	ITEM-214	
Road Median Strip (Type A)	Backfilling Type D		m3	17.24	5,035	86,803					7,222	ITEM-37	
	Crush Stone Base Works	t=5cm	m2	77.35	5,900	456,365					37,970	ITEM-44	
	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	5.41	102,591	555,017					46,177	ITEM-89	
Road Median Strip (Type B)	Backfilling Type D		m3	32.03	5,035	161,271					13,418	ITEM-37	
	Crush Stone Base Works	t=5cm	m2	134.40	5,900	792,960					65,974	ITEM-44	
Curb Stone Installation	Curb Stone Installation	Type A-1	m	1,929.00	19,035	36,718,515					3,054,980	ITEM-229	
	Curb Stone Installation	Type A-2	m	4.00	14,650	58,600					4,876	ITEM-230	
	Curb Stone Installation	Type A-3	m	44.00	10,264	451,616					37,574	ITEM-231	
	Curb Stone Installation	Type C	m	62.00	11,584	718,208					59,755	ITEM-232	
	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	9.41	102,591	965,381					80,320	ITEM-89	
Lighting Pedestal	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	3.22	110,086	354,477					29,492	ITEM-86	
	Rebar Works	Less or equal to Φ13	t	0.280	279,905	78,373			62,640	17,539	24,060	ITEM-80	
	Formworks	General Type	m2	18.21	16,268	296,240					24,647	ITEM-91	
Electric Facilities			L.Sum	1.00					41,867,651	41,867,651	41,867,651	JICA Study Team	
標識工	Traffic Information Board	GS-1 / GS-4	no	2.00	18,782,008	37,564,016			6,596	13,192	3,138,518	【NOT USED】	
	Traffic Information Board	GS-2 / GS-3	no	4.00	25,889,804	103,559,216			7,642	30,568	8,646,695	【NOT USED】	
Others	Bridge Name Plate Installation Works		no	1.00	2,327,849	2,327,849					193,677	ITEM-125	
	Bridge Record Plate Installation Works		no	1.00	2,327,849	2,327,849					193,677	ITEM-125	
9 Pavement						581,047,771					48,343,175		
Bridge Section	Surface Course (Carriage)	t=4cm	m2	6,612.20	9,024	59,668,493					4,964,419	ITEM-115	05300-01
	Binder Course (Carriage / Bridge Section)	t=4cm	m2	6,612.20	9,024	59,668,493					4,964,419	ITEM-114	05300-03
Approach Section	Surface Course (Carriage)	t=5cm	m2	6,334.00	10,998	69,661,332					5,795,823	ITEM-116	05300-02
	Binder Course (Carriage)	t=5cm	m2	6,171.00	11,579	71,454,009					5,944,974	ITEM-113	05300-04
	Base Layer (Carriage)	t=25cm	m2	2,220.00	17,176	38,130,720					3,172,476	ITEM-112	03800-02
	Sub Base Layer (Carriage)	t=25cm	m2	5,271.00	17,176	90,534,696					7,532,487	ITEM-108	03800-01
Approach Section	Surface Course (Carriage)	t=5cm	m2		10,998							ITEM-116	
	Binder Course (Carriage)	t=5cm	m2		11,579							ITEM-113	
	Base Layer (Carriage)	t=15cm	m2	3,051.00	10,065	30,708,315					2,554,932	ITEM-111	
	Sub Base Layer (Carriage)	t=25cm	m2		17,176							ITEM-108	03800-01
Approach Section	Surface Course (Carriage)	t=5cm	m2		10,998							ITEM-116	
	Binder Course (Carriage)	t=5cm	m2		11,579							ITEM-113	
	Base Layer (Carriage)	t=25cm	m2		17,176							ITEM-112	03800-02
	Sub Base Layer (Carriage)	t=30cm	m2	900.00	20,129	18,116,100					1,507,260	ITEM-109	
Sidewalk Section	Interlocking Block Pavement	t=6cm	m2	140.00	36,354	5,089,560					423,451	ITEM-118	
	Crush Stone Base Works	t=10cm	m2	140.00	8,690	1,216,600					101,221	ITEM-45	
コンクリートシール工	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	501.50	104,911	52,612,867					4,377,391	ITEM-84	
	Base Layer (Carriage)	t=15cm	m2	5,015.00	10,065	50,475,975					4,199,601	ITEM-111	
Road Excavation	Backhoe Excavation	0.8m3	m3	4,000.00	2,801	11,204,000					932,173	ITEM-33	
	Road Bed Construction Works	Material From Borrow Pit	m3	34.00	19,883	676,022					56,245	ITEM-28	
Road Marking Works	Road Marking Works	Full Line 15cm	m	6,413.00	1,852	11,876,876					988,156	ITEM-120	
	Road Marking Works	Dashed Line 15cm	m	290.00	2,009	582,610					48,473	ITEM-121	
	Road Marking Works	Arrow / Text Marking (Conv. to 15cm width)	m	1,974.00	3,903	7,704,522					641,016	ITEM-123	
	Road Marking Works	Arrow / Text Marking (Conv. to 15cm width)	m	427.00	3,903	1,666,581					138,660	ITEM-123	
10 AF.1 Area Ground Improvement						432,913,345				26,512,007	62,530,397		
Ground Improvement	CDM-Mega Method	L_1=15.5m / L=17.5m	no	207.00	1,328,416	274,982,112			43,659	9,037,413	31,915,925	ITEM-59	
	CDM-Mega Method	L_1=17.5m / L=17.5m	no	60.00	1,495,768	89,746,080			43,659	2,619,540	10,086,414	ITEM-60	
	Licence Fee	CDM-Mega Method	m3	9,240.95					30	277,229	277,229	STD-7	'03900-01
	Ground Improv. Works Equip.	Japanese Procurement	no	267.00					54,599	14,577,825	14,577,825	ITEM-26	
	Slurry Plant In Situ Displacement Works		times	1.00	547,283	547,283					45,534	ITEM-61	
	Backhoe Mixing Stabilization Works	Imp. Deep = 1.3m・Cement 230 kg/m3	m3	1,761.80	33,330	58,720,794					4,885,570	ITEM-32	03910-01
	Test Cost	Geotechnical Test (AF.1 Side)	P.Sum	1.00	8,917,076	8,917,076					741,901	QTN-15	03900-02
11 Material Shipping Cost										62,198,011	62,198,011		
Flyover Section	Material Shipping Cost	Preparation Works	L.Sum	1.00					3,385,785	3,385,785	3,385,785	Table 6-4	
	Material Shipping Cost	Foundation	L.Sum	1.00					16,552,732	16,552,732	16,552,732	Table 6-4	
	Material Shipping Cost	Substructure (Abutment)	L.Sum	1.00					982,099	982,099	982,099	Table 6-4	
	Material Shipping Cost	Substructure (Pier)	L.Sum	1.00					9,636,697	9,636,697	9,636,697	Table 6-4	
	Material Shipping Cost	Superstructure (PC I Girder Bridge)	L.Sum	1.00					16,873,799	16,873,799	16,873,799	Table 6-4	
	Material Shipping Cost	Superstructure (Steel Plate Girder Bridge)	L.Sum	1.00					3,696,324	3,696,324	3,696,324	Table 6-4	
	Material Shipping Cost	Superstructure (Steel Box Bridge)	L.Sum	1.00					5,938,559	5,938,559	5,938,559	Table 6-4	
	Material Shipping Cost	Approach Road	L.Sum	1.00					1,154,092	1,154,092	1,154,092	Table 6-4	
	Material Shipping Cost	Mechanically Stabilized Earth Wall	L.Sum	1.00					635,197	635,197	635,197	Table 6-4	
Side Road Section	Material Shipping Cost	Drainage Works	L.Sum	1.00					3,342,727	3,342,727	3,342,727	Table 6-4	
12 Safety Related Cost						95,786,000				32,901,552	40,870,947		
	Safety Personnel Cost		L.Sum	1.00	41,850,000	41,850,000			32,901,552	32,901,552	36,383,472	ITEM-22	01600-01
	Temporary Fence Works	Installation & Removal	m	800.00	67,420	53,936,000					4,487,475	ITEM-103	
13 Traffic Related Cost						46,175,000					3,841,760		
	Traffic Control Personnel Cost		L.Sum	1.00	46,175,000	46,175,000					3,841,760	ITEM-23	
14 Common Indirect Costs										116,621,821	116,621,821		
1. Rate Calculation	Common Indirect Cost (Rate Calculation)	Rate Calculation / Flyover Section	L.Sum	1.00					116,621,821	116,621,821	116,621,821	ITEM-20	
	Common Indirect Cost (Rate Calculation)	Rate Calculation / Side Road Section	L.Sum	1.00					19,080,181	19,080,181	19,080,181	ITEM-21	
15 Site Indirect Costs						1,041,014,035				262,143,210	348,755,578		
1. Site Administration Cost			L.Sum	1.00	836,418,830	836,418,830			184,135,742	184,135,742	253,725,789	ITEM-3	
2. Overseas Travel Cost			L.Sum	1.00					14,711,640	14,711,640	14,711,640	ITEM-15	
3. Overseas Allowance Cost			L.Sum	1.00					56,087,280	56,087,280	56,087,280	ITEM-16	
4. Supervision Vehicle Cost			L.Sum	1.00	202,380,920	202,380,920					16,838,093	ITEM-17	
5. Quality Control Cost			L.Sum	1.00	1,976,190	1,976,190			6,808,910	6,808,910	6,973,329	ITEM-18	
6. Defect Inspection Cost			L.Sum	1.00	238,095	238,095			399,638	399,638	419,448	ITEM-19	
16 Overhead Costs										161,074,959	161,074,959		
1. Rate Calculation	Overhead Cost	Rate Calculation / Flyover Section	L.Sum	1.00					161,074,959	161,074,959	161,074,959	ITEM-1	
	Overhead Cost	Rate Calculation / Side Road Section	L.Sum	1.00					14,798,756	14,798,756	14,798,756	ITEM-2	

Ⅱ Civil Works Construction Cost (Side Road Section)							**1,960,435,506**				**112,904,976**	**276,013,210**		
1 Site Clearing Works							50,317,474					4,186,414		
		Site Clearing Works	Less than 50 trees/100 m2	m2	14,204.00	932	13,238,128					1,101,412	ITEM-104	
		Demolition Works	Unreinf. Conc. Structure (Including Disposal)	m3	710.00	14,328	10,172,880					846,384	ITEM-40	
		Demolition Works	Reinf. Conc. Structure (Including Disposal)	m3	306.00	17,716	5,421,096					451,035	ITEM-41	
		Asphalt Pav. Removal Works	t≤10cm / Backhoe 0.45m3	m3	933.00	465	433,845					36,096	ITEM-127	
		Surplus Transport	Asphalt / Concrete Rubble	m3	1,275.00	16,511	21,051,525					1,751,487	ITEM-39	
2 Earthworks							151,322,042					12,589,994		
	Road Excavation	Backhoe Excavation	0.8m3	m3	11,019.00	2,801	30,864,219					2,567,903	ITEM-33	
		Road Bed Construction Works		m3	1,573.00	833	1,310,309					109,018	ITEM-27	
		Subgrade Construction Works		m3	732.00	1,394	1,020,408					84,898	ITEM-29	
		Draining Pipe Installation Works	PVC 50mm	m2	2,202.00	3,347	7,370,094					613,192	ITEM-42	
	Structural Excavation	Backhoe Excavation	0.8m3	m3	14,850.00	2,801	41,594,850					3,460,692	ITEM-33	
		Backfilling Type C		m3	8,780.00	5,166	45,357,480					3,773,742	ITEM-36	
		Surplus Transport	Sand Soil	m3	5,093.00	4,674	23,804,682					1,980,550	ITEM-38	
3 Drainage Works							663,428,571				8,821,646	64,018,903		
	Temp. Retaining Wall	H Pile Driving /Removal Works	Vibrohammer 60kW / H-300	no	134.00	76,898	10,304,332					857,320	ITEM-96	
		Lagging Works	Install & Removal	m2	640.00	5,832	3,732,480					310,542	ITEM-97	
		Temp. Constr. Material	Temp. Ret. Wall (Drainage)	place	4.00	6,334,252	25,337,008					2,108,039	ITEM-99	
	Drainage Works	U Ditch	Type A	no	25.00	242,467	6,061,675			2,524	63,100	567,431	ITEM-215	
		U Ditch	Type B	no	73.00	16,741	1,222,093					101,678	ITEM-216	
		U Ditch	Type C	no	15.00	185,534	2,783,010					231,546	ITEM-217	
		U-Type Side Gutter Install	500×500 (With Cover)	m	34.00	132,856	4,517,104			1,659	56,406	432,229	ITEM-218	04100-01
		U-Type Side Gutter Install	500×850 (With Cover)	m	0.00	174,598				2,127			ITEM-219	
		U-Type Side Gutter Install	800×800 (With Cover)	m	58.00	195,144	11,318,352			2,544	147,552	1,089,239	ITEM-220	
		U-Type Side Gutter Install	1000×1500	m	120.00	271,777	32,613,240			2,867	344,040	3,057,462	ITEM-221	
		U-Type Side Gutter Install	1500×1500	m	736.00	301,694	222,046,784			3,210	2,362,560	20,836,852	ITEM-222	
		U-Type Side Gutter Install	1500×1700	m	101.00	352,922	35,645,122			3,490	352,490	3,318,164	ITEM-223	
		Concrete Cover	Type A	no	240.00	19,911	4,778,640			536	128,640	526,223	ITEM-224	
		Concrete Cover	Type B	no	202.00	29,235	5,905,470			773	156,146	647,481	ITEM-225	
		Pipe Culvert (Φ900mm)	360°	m	10.00	487,937	4,879,370			4,565	45,650	451,614	ITEM-240	04310-03
		Water Collector Install	Type B	no	2.00	731,323	1,462,646			2,687	5,374	127,066	ITEM-212	
		Water Collector Install	600×600×1200	no	11.00	222,995	2,452,945			645	7,095	211,180	ITEM-239	
		Pipe Culvert (Φ300mm)	Type A	m	229.00	80,790	18,500,910			953	218,237	1,757,513	ITEM-213	
		Box Culvert	1000×1000	m	52.00	413,000	21,476,000			7,642	397,384	2,184,187	ITEM-226	04320-03
		Box Culvert	1500×1000	m	216.00	484,284	104,605,344			9,177	1,982,232	10,685,397	ITEM-227	04320-02
		Box Culvert	1500×1500	m	249.00	577,454	143,786,046			10,260	2,554,740	14,517,739	ITEM-228	04320-01
4 Pavement Works							950,047,142					79,043,922		
	Side Road Section 1	Surface Course (Carriage)	t=5cm	m2	13,502.00	10,998	148,494,996					12,354,784	ITEM-116	
		Binder Course (Carriage)	t=5cm	m2	13,502.00	11,579	156,339,658					13,007,460	ITEM-113	
		Base Layer (Carriage)	t=15cm	m2	13,502.00	10,065	135,897,630					11,306,683	ITEM-111	
		Sub Base Layer (Carriage)	t=25cm	m2	13,502.00	17,176	231,910,352					19,294,941	ITEM-108	
	Juntion Section	Surface Course (Carriage)	t=5cm	m2	1,532.00	10,998	16,848,936					1,401,831	ITEM-116	
		Binder Course (Carriage)	t=5cm	m2	1,532.00	11,579	17,739,028					1,475,887	ITEM-113	
		Base Layer (Carriage)	t=25cm	m2	1,532.00	17,176	26,313,632					2,189,294	ITEM-112	
		Sub Base Layer (Carriage)	t=30cm	m2	1,532.00	20,129	30,837,628					2,565,691	ITEM-109	
	Tmp Tannrinn Brd	Surface Course (Carriage)	t=5cm	m2	1,531.00	10,998	16,837,938					1,400,916	ITEM-116	
	Approach Road	Binder Course (Carriage)	t=5cm	m2	1,531.00	11,579	17,727,449					1,474,924	ITEM-113	
		Base Layer (Carriage)	t=15cm	m2	1,531.00	10,065	15,409,515					1,282,072	ITEM-111	
		Sub Base Layer (Carriage)	t=25cm	m2	1,531.00	17,176	26,296,456					2,187,865	ITEM-108	
	Sidewalk Section	Interlocking Block Pavement	t=6cm	m2	2,100.00	36,354	76,343,400					6,351,771	ITEM-118	
		Crush Stone Base Works	t=10cm	m2	2,100.00	8,690	18,249,000					1,518,317	ITEM-45	
	Road Marking Works	Road Marking Works	Full Line 15cm	m	2,854.00	1,852	5,285,608					439,763	ITEM-120	
		Road Marking Works	Dashed Line 15cm	m	524.00	2,009	1,052,716					87,586	ITEM-121	
		Road Marking Works	Transversal Line 15cm	m	2,993.00	2,323	6,952,739					578,468	ITEM-122	
		Road Marking Works	Arrow / Text Marking (Conv. to 15cm width)	m	387.00	3,903	1,510,461					125,670	ITEM-123	
5 Road Ancillary Works							145,320,277				33,867	12,124,514		
	Curb Stone Installation	Curb Stone Installation	Type A-1	m	1,256.00	19,035	23,907,960					1,989,142	ITEM-229	
		Curb Stone Installation	Type A-2	m	54.00	14,650	791,100					65,820	ITEM-230	
		Curb Stone Installation	Type A-3	m	122.00	10,264	1,252,208					104,184	ITEM-231	
		Curb Stone Installation	Type C	m	1,299.00	11,584	15,047,616					1,251,962	ITEM-232	
	Road Traffic Barrier Works	Balustrade	For Concrete Base (H=1100)	m	795.00	108,746	86,453,070			43	33,867	7,226,762	ITEM-235	
	Traffic Signalization Works	Traffic Regulatory Sign	TS-1 / TS-3	no	7.00	439,541	3,076,787					255,989	ITEM-233	
		Traffic Warning Sign	TS-7 / TS-10 / TS-11	no	18.00	821,752	14,791,536					1,230,656	ITEM-234	
		Traffic Information Board	GS-1 / GS-4	no	0.00	18,782,008				6,596			【NOT USED】	
		Traffic Information Board	GS-2 / GS-3	no	0.00	25,889,804				7,642			【NOT USED】	
6 Eletric Facilities Works											70,170,526	70,170,526		
		Traffic Lights Installation Works		L.Sum	1.00					70,170,526	70,170,526	70,170,526	JICA Study Team	
#VALUE!											33,878,937	33,878,937		
		Common Indirect Cost (Rate Calculation)	Rate Calculation / Side Road Section	L.Sum	1.00					19,080,181	19,080,181	19,080,181	ITEM-21	
		Overhead Cost	Rate Calculation / Side Road Section	L.Sum	1.00					14,798,756	14,798,756	14,798,756	ITEM-2	

Unit Cost for Civil Works

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
Civil Works								
ITEM-1	Overhead Cost	Rate Calculation / Flyover Section	L.Sum			161,074,959	161,074,959	MLIT Cost Estimate Standard for Civil Works/2016 P<65>
ITEM-2	Overhead Cost	Rate Calculation / Side Road Section	L.Sum			14,798,756	14,798,756	MLIT Cost Estimate Standard for Civil Works/2016 P<65>
ITEM-3	Site Administration Cost	CBS Method	L.Sum	836,418,830		184,135,742	253,725,789	MLIT Cost Estimate Standard for Civil Works/2016 P<61>
ITEM-4	Supervision Personal Cost		L.Sum	481,954,000		155,798,000	195,896,573	Composite Item
ITEM-5	Supervision Personnel Cost	Japanese Management Personnel	L.Sum			155,798,000	155,798,000	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-6	Supervision Personnel Cost	Local Management Personnel	L.Sum	429,032,000			35,695,462	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-7	Supervision Personnel Cost	Local Office Personnel	L.Sum	52,922,000			4,403,110	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-8	Construction Insurance		L.Sum	11,273,720		16,235,384	17,173,358	Insurance Company Material
ITEM-9	Employee Benefit Expenses		L.Sum			1,704,288	1,704,288	JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.46
ITEM-10	Office Supply Cost		L.Sum			5,897,984	5,897,984	JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.47
ITEM-11	Telecomunication Cost		L.Sum			2,278,767	2,278,767	JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.47
ITEM-12	Social Expenses		L.Sum			2,221,319	2,221,319	JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.49
ITEM-13	Utilities Cost		L.Sum	282,535,110			23,506,921	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-14	Miscellaneous		L.Sum	60,656,000			5,046,579	JICA Study Team
ITEM-15	Overseas Travel Cost		L.Sum			14,711,640	14,711,640	JICA Cost Estimate & Design Manual/2016 P.70
ITEM-16	Overseas Allowance Cost		L.Sum			56,087,280	56,087,280	JICA Cost Estimate & Design Manual/2016 P.71
ITEM-17	Supervision Vehicle Cost		L.Sum	202,380,920			16,838,093	JICA Cost Estimate & Design Manual/2016 P.72
ITEM-18	Quality Control Cost		L.Sum	1,976,190		6,808,910	6,973,329	JICA Cost Estimate & Design Manual/2016 P.73
ITEM-19	Defect Inspection Cost		L.Sum	238,095		399,638	419,448	JICA Cost Estimate & Design Manual/2016 P.73
ITEM-20	Common Indirect Cost (Rate Calculation)	Rate Calculation / Flyover Section	L.Sum			116,621,821	116,621,821	MLIT Cost Estimate Standard for Civil Works/2016 P<36>
ITEM-21	Common Indirect Cost (Rate Calculation)	Rate Calculation / Side Road Section	L.Sum			19,080,181	19,080,181	MLIT Cost Estimate Standard for Civil Works/2016 P<36>
ITEM-22	Safety Personnel Cost		L.Sum	41,850,000		32,901,552	36,383,472	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-23	Traffic Control Personnel Cost		L.Sum	46,175,000			3,841,760	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-24	Project Sign Board		L.Sum	9,000,000			748,800	JICA Cost Estimate & Design Manual/2016 P.68
ITEM-25	Foundation Works Equip.	Japanese Procurement	no			416,291	416,291	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-26	Ground Improv. Works Equip.	Japanese Procurement	no			54,599	54,599	Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan
ITEM-27	Road Bed Construction Works		m3	833			69	MLIT Cost Estimate Standard for Civil Works/2012 P.37
ITEM-28	Road Bed Construction Works	Material From Borrow Pit	m3	19,883			1,654	MLIT Cost Estimate Standard for Civil Works/2012 P.37
ITEM-29	Subgrade Construction Works		m3	1,394			116	MLIT Cost Estimate Standard for Civil Works/2012 P.37
ITEM-30	Subgrade Construction Works	Material From Borrow Pit	m3	20,444			1,701	MLIT Cost Estimate Standard for Civil Works/2012 P.37
ITEM-31	Backhoe Mixing Stabilization Works	Cement 60 kg/m3	m3	13,241			1,102	MLIT Cost Estimate Standard for Civil Works/2012 P.51
ITEM-32	Backhoe Mixing Stabilization Works	Imp. Deep = 1.3m ・ Cement 230 kg/m3	m3	33,330			2,773	MLIT Cost Estimate Standard for Civil Works/2012 P.52
ITEM-33	Backhoe Excavation	0.8m3	m3	2,801			233	MLIT Cost Estimate Standard for Civil Works/2013 P.20
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	61			5	MLIT Cost Estimate Standard for Civil Works/2013 P.20
ITEM-35	Tamper Compacting		m3	1,561			130	MLIT Cost Estimate Standard for Civil Works/2013 P.22
ITEM-36	Backfilling Type C		m3	5,166			430	MLIT Cost Estimate Standard for Civil Works/2013 P.23
ITEM-37	Backfilling Type D		m3	5,035			419	MLIT Cost Estimate Standard for Civil Works/2013 P.23
ITEM-38	Surplus Transport	Sand Soil	m3	4,674			389	Composite Item
ITEM-39	Surplus Transport	Asphalt / Concrete Rubble	m3	16,511			1,374	Composite Item
ITEM-40	Demolition Works	Unreinf. Conc. Structure (Including Disposal)	m3	14,328			1,192	MOC Cost Estimate Standard for Civil Works/1993 P.145
ITEM-41	Demolition Works	Reinf. Conc. Structure (Including Disposal)	m3	17,716			1,474	MOC Cost Estimate Standard for Civil Works/1993 P.145
ITEM-42	Draining Pipe Installation Works	PVC 50mm	m2	3,347			278	MLIT Cost Estimate Standard for Civil Works/2012 P.56
ITEM-43	Filter Material Installing Works		m3	12,610			1,049	MLIT Cost Estimate Standard for Civil Works/2013 P.89
ITEM-44	Crush Stone Base Works	t=5cm	m2	5,900			491	MLIT Cost Estimate Standard for Civil Works/2013 P.51
ITEM-45	Crush Stone Base Works	t=10cm	m2	8,690			723	MLIT Cost Estimate Standard for Civil Works/2013 P.51
ITEM-46	Crush Stone Base Works	t=15cm	m2	11,480			955	MLIT Cost Estimate Standard for Civil Works/2013 P.51
ITEM-47	Crush Stone Base Works	t=20cm	m2	14,270			1,187	MLIT Cost Estimate Standard for Civil Works/2013 P.51
ITEM-48	Crush Stone Base Works		m3	68,709			5,717	MLIT Cost Estimate Standard for Civil Works/2013 P.51
ITEM-49	Retaining Wall (Type 2)	24N/mm2	m3	107,514			8,945	MLIT Cost Estimate Standard for Civil Works/2013 P.66
ITEM-50	Box Culvert (Type 2)	24N/mm2	m3	105,463			8,775	MLIT Cost Estimate Standard for Civil Works/2014 P.121
ITEM-51	Geotextile Installation		m2	41,649			3,465	【Adapted】MLIT Cost Estimate Standard for Civil Works/2015 P.58/59
ITEM-52	Precast Panels Installation Works	Mechanically Stabilized Earth Wall (Type 1)	m2	270,816		1,902	24,434	MLIT Cost Estimate Standard for Civil Works/2016 P.51
ITEM-53	Reinf. Strips Installation Works	Mechanically Stabilized Earth Wall (Type 1)	m	113		1,370	1,379	MLIT Cost Estimate Standard for Civil Works/2018 P.52
ITEM-54	Fill, Level & Compaction Works	Mechanically Stabilized Earth Wall (Type 1)	m3	4,255			354	MLIT Cost Estimate Standard for Civil Works/2018 P.52
ITEM-55	CDM-Mega Method	L_1＝3.8m / L＝4.4m	no	303,620		19,540	44,801	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-56	CDM-Mega Method	L_1＝4.0m / L＝4.6m	no	318,786		19,540	46,063	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-57	CDM-Mega Method	L_1＝11.3m / L＝12.0m	no	884,770		34,500	108,113	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-58	CDM-Mega Method	L_1＝11.8m / L＝12.5m	no	922,737		34,500	111,272	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-59	CDM-Mega Method	L_1＝15.5m / L＝17.5m	no	1,328,416		43,659	154,183	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-60	CDM-Mega Method	L_1＝17.5m / L＝17.5m	no	1,495,768		43,659	168,107	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-61	Slurry Plant In Situ Displacement Works		times	547,283			45,534	MLIT Cost Estimate Standard for Civil Works/2016 P.65
ITEM-62	Reverse Circulation Drilling Works	AF.1／Φ1500mm／L=40.5m	no	13,138,137		621,757	1,714,850	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-63	Reverse Circulation Drilling Works	PF.1／Φ1500mm／L=41.5m	no	13,357,420		628,289	1,739,626	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-64	Reverse Circulation Drilling Works	PF.2／Φ1500mm／L=41.5m	no	13,357,420		628,289	1,739,626	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-65	Reverse Circulation Drilling Works	PF.3／Φ1500mm／L=38.0m	no	12,352,018		520,709	1,548,397	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-66	Reverse Circulation Drilling Works	PF.4／Φ1500mm／L=40.5m	no	12,898,329		537,522	1,610,663	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-67	Reverse Circulation Drilling Works	PF.5／Φ1500mm／L=35.5m	no	11,338,928		557,487	1,500,886	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-68	Reverse Circulation Drilling Works	PF.6／Φ1500mm／L=33.5m	no	10,897,039		543,049	1,449,683	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-69	Reverse Circulation Drilling Works	PF.7／Φ1500mm／L=37.0m	no	11,486,173		461,934	1,417,584	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-70	Reverse Circulation Drilling Works	PF.8／Φ1500mm／L=37.0m	no	11,672,834		568,995	1,540,175	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-71	Reverse Circulation Drilling Works	PF.9／Φ1500mm／L=35.5m	no	11,233,270		510,332	1,444,940	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-72	Reverse Circulation Drilling Works	PF.10／Φ1500mm／L=32.5m	no	10,674,909		535,791	1,423,943	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-73	Reverse Circulation Drilling Works	PF.11／Φ1500mm／L=32.5m	no	10,470,210		460,508	1,331,629	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-74	Reverse Circulation Drilling Works	PF.12／Φ1500mm／L=33.0m	no	10,580,355		463,653	1,343,939	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-75	Reverse Circulation Drilling Works	PF.13／Φ1500mm／L=32.5m	no	10,470,210		460,508	1,331,629	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-76	Reverse Circulation Drilling Works	PF.14／Φ1500mm／L=33.5m	no	10,866,587		524,365	1,428,465	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-77	Reverse Circulation Drilling Works	PF.15／Φ1500mm／L=34.0m	no	10,794,865		469,217	1,367,350	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-78	Reverse Circulation Drilling Works	AF.2／Φ1500mm／L=34.0m	no	10,884,893		495,047	1,400,670	MLIT Cost Estimate Standard for Civil Works/2016 P.141
ITEM-79	Test Cost	Static Loading Test	place	62,781,830		1,044,580	6,268,028	JICA Study Team
ITEM-80	Rebar Works	Less or equal to Φ13	t	279,905		62,640	85,928	MOC Cost Estimate Standard for Civil Works/1992 P.257
ITEM-81	Rebar Works	Φ16～Φ25	t	237,219		60,480	80,217	MOC Cost Estimate Standard for Civil Works/1992 P.257
ITEM-82	Rebar Works	Φ29～Φ32	t	144,987		61,560	73,623	MOC Cost Estimate Standard for Civil Works/1992 P.257
ITEM-83	Mortar Mix	1:3	m3	81,822			6,808	MLIT Cost Estimate General Standard for Civil Works/2013 P.Ⅱ-4-①-6
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	104,911			8,729	MLIT Cost Estimate Standard for Civil Works/2013 P.248

Unit Cost for Civil Works

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
ITEM-85	Struc. Concrete (General Struc.)	18N/mm2 / Conc. Pump Cast	m3	105,621			8,788	MLIT Cost Estimate Standard for Civil Works/2013 P.248/249
ITEM-86	Struc. Concrete (General Struc.)	24N/mm2 / Conc. Pump Cast	m3	110,086			9,159	MLIT Cost Estimate Standard for Civil Works/2013 P.248/249
ITEM-87	Struc. Concrete	24N/mm2 (Bridge Slab)	m3	113,737			9,463	MLIT Cost Estimate Standard for Civil Works/2013 P.248/249
ITEM-88	Struc. Concrete	30N/mm2 (Bridge Slab)	m3	123,328			10,261	MLIT Cost Estimate Standard for Civil Works/2013 P.248/249
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	102,591			8,536	MLIT Cost Estimate Standard for Civil Works/2013 P.249
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	107,336			8,930	MLIT Cost Estimate Standard for Civil Works/2013 P.249
ITEM-91	Formworks	General Type	m2	16,268			1,353	MLIT Cost Estimate Standard for Civil Works/2013 P.252
ITEM-92	Formworks	Small Structures	m2	14,632			1,217	MLIT Cost Estimate Standard for Civil Works/2013 P.252
ITEM-93	Formworks	Cylindrical Type	m2	21,698			1,805	MLIT Cost Estimate Standard for Civil Works/2013 P.252
ITEM-94	Formworks	For Levelling Concrete	m2	8,298			690	MLIT Cost Estimate Standard for Civil Works/2013 P.252
ITEM-95	Formworks	Metallic Type	no	64,591,252			5,373,992	Quotation
ITEM-96	H Pile Driving /Removal Works	Vibrohammer 60kW / H-300	no	76,898			6,398	MLIT Cost Estimate Standard for Civil Works/2016 P.228
ITEM-97	Lagging Works	Install & Removal	m2	5,832			485	MLIT Cost Estimate Standard for Civil Works/2016 P.270/271
ITEM-98	Temp. Constr. Material	Temp. Ret. Wall (Substructure)	place	4,867,438			404,971	JICA Study Team
ITEM-99	Temp. Constr. Material	Temp. Ret. Wall (Drainage)	place	6,334,252			527,010	JICA Study Team
ITEM-100	Scaffolding Works	Handrail Assembling Type	m2	11,247			936	MLIT Cost Estimate Standard for Civil Works/2016 P.273
ITEM-101	Falsework	Pipe Support Type	m3	7,823			651	MLIT Cost Estimate Standard for Civil Works/2016 P.277
ITEM-102	Falsework	Wedge Connection Type	m3	7,343			611	MLIT Cost Estimate Standard for Civil Works/2016 P.277
ITEM-103	Temporary Fence Works	Installation & Removal	m	67,420			5,609	MLIT Cost Estimate Standard for Civil Works/2016 P.302
ITEM-104	Site Clearing Works	Less than 50 trees/100 m2	m2	932			78	MLIT Cost Estimate Standard for Civil Works/2015 P.387/388
ITEM-105	Scaffolding Works	Catwalk Type	m	5,064			421	MLIT Cost Estimate Standard for Civil Works/2016 P.387
ITEM-106	Concrete Pavement	Co 20/20cm	m2	37,911		1,478	4,632	Composite
ITEM-107	Subgrade Preparation Works		m2	703			58	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-108	Sub Base Layer (Carriage)	t=25cm	m2	17,176			1,429	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-109	Sub Base Layer (Carriage)	t=30cm	m2	20,129			1,675	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-110	Sub Base Layer (Carriage)	t=35cm	m2	23,082			1,920	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-111	Base Layer (Carriage)	t=15cm	m2	10,065			837	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-112	Base Layer (Carriage)	t=25cm	m2	17,176			1,429	MLIT Cost Estimate Standard for Civil Works/2012 P.495
ITEM-113	Binder Course (Carriage)	t=5cm	m2	11,579			963	MLIT Cost Estimate Standard for Civil Works/2012 P.500
ITEM-114	Binder Course (Carriage / Bridge Section)	t=4cm	m2	9,024			751	MLIT Cost Estimate Standard for Civil Works/2012 P.500
ITEM-115	Surface Course (Carriage)	t=4cm	m2	9,024			751	MLIT Cost Estimate Standard for Civil Works/2012 P.500
ITEM-116	Surface Course (Carriage)	t=5cm	m2	10,998			915	MLIT Cost Estimate Standard for Civil Works/2012 P.500
ITEM-117	Concrete Surface Course	t=20cm (Manual Cast)	m2	23,641		1,478	3,445	MLIT Cost Estimate Standard for Civil Works/2016 P.454
ITEM-118	Interlocking Block Pavement	t=6cm	m2	36,354			3,025	MOC Cost Estimate Standard for Civil Works/1992 P.463
ITEM-119	Guard Rail Installation	Box Beam	m	163,508			13,604	MOC Cost Estimate Standard for Civil Works/1992 P.421
ITEM-120	Road Marking Works	Full Line 15cm	m	1,852			154	MOC Cost Estimate Standard for Civil Works/1992 P.438
ITEM-121	Road Marking Works	Dashed Line 15cm	m	2,009			167	MOC Cost Estimate Standard for Civil Works/1992 P.438
ITEM-122	Road Marking Works	Transversal Line 15cm	m	2,323			193	MOC Cost Estimate Standard for Civil Works/1992 P.438
ITEM-123	Road Marking Works	Arrow / Text Marking (Conv. to 15cm width)	m	3,903			325	MOC Cost Estimate Standard for Civil Works/1992 P.438
ITEM-124	Balustrade Installation	Manual / Post Space 3m	m	1,219			101	MOC Cost Estimate Standard for Civil Works/1993 P.430
ITEM-125	Bridge Name Plate Installation Works		no	2,327,849			193,677	MOC Cost Estimate Standard for Civil Works/1993 P.444
ITEM-126	Block Installation	Length ≤ 600 mm / Weight<50 kg	m	3,364			280	MLIT Cost Estimate Standard for Civil Works/2012 P.533
ITEM-127	Asphalt Pav. Removal Works	t≤10cm / Backhoe 0.45m3	m3	465			39	MLIT Cost Estimate Standard for Civil Works/2012 P.571
ITEM-128	Abutment & Pier (Type 2)	24 N/mm2	m3	101,403			8,437	MLIT Cost Estimate Standard for Civil Works/2016 P.735
ITEM-129	Rebar Install	D10～D13 (PC Girder)	t	348,310		62,640	91,619	MOC Cost Estimate Standard for Civil Works/2000 P.625
ITEM-130	Rebar Install	D16～D25 (PC Girder)	t	348,310		60,480	89,459	MOC Cost Estimate Standard for Civil Works/2000 P.625
ITEM-131	PC Cable Install	7S15.2 (SWPR7BL)	m	7,449		3,147	3,767	MOC Cost Estimate Standard for Civil Works/2000 P.625
ITEM-132	Concrete	40N/mm2 (PC Girder)	m3	159,752		972	14,263	MOC Cost Estimate Standard for Civil Works/2000 P.626
ITEM-133	Prestressing Works	130t	cable	80,234		32,000	38,675	MOC Cost Estimate Standard for Civil Works/2000 P.626
ITEM-134	Temporary Storage		no	378,544			31,495	MOC Cost Estimate Standard for Civil Works/2000 P.626
ITEM-135	Equipment Rent. Install & Removal	Post Tension Girder	L.Sum	310,864,904			25,863,960	MOC Cost Estimate Standard for Civil Works/2000 P.626/627
ITEM-136	Steel Base Formwork Works	Install & Removal	m	15,908			1,324	MOC Cost Estimate Standard for Civil Works/2000 P.627
ITEM-137	Steel Base Formwork Adjustment Works		no	41,995			3,494	MOC Cost Estimate Standard for Civil Works/2000 P.627
ITEM-138	Gantry Crane Install & Removal Works		no	564,812			46,992	MOC Cost Estimate Standard for Civil Works/2000 P.627
ITEM-139	Gantry Crane Rails Install & Removal Works		m (both rails)	12,838			1,068	MOC Cost Estimate Standard for Civil Works/2000 P.627
ITEM-140	PC Girder Erection	Truck Crane Erection Method	no	1,277,811			106,314	MLIT Cost Estimate Standard for Civil Works/2016 P.802
ITEM-141	Girder Transportation (Short Distance)	Heavy Load Vehicle	no	582,162			48,436	MLIT Cost Estimate Standard for Civil Works/2016 P.802
ITEM-142	Night Time Construction (Allowance)	PC Girder	no	545,390			45,376	MLIT Cost Estimate Standard for Civil Works/2016 P<22>
ITEM-143	Rebar Works	D10～D13	t	313,766		62,640	88,745	MLIT Cost Estimate Standard for Civil Works/2016 P.805
ITEM-144	Rebar Works	D16～D25	t	313,766		60,480	86,585	MLIT Cost Estimate Standard for Civil Works/2016 P.805
ITEM-145	Concrete Works	30N/mm2 (Cross Girder)	m3	263,676			21,938	MLIT Cost Estimate Standard for Civil Works/2016 P.805
ITEM-146	PC Cable Installation Works	4S15.2 (SWPR7BL)	m	4,014		1,529	1,863	MLIT Cost Estimate Standard for Civil Works/2016 P.806
ITEM-147	Prestressing Works	700kN (70t)	cable	21,433		38,900	40,683	MLIT Cost Estimate Standard for Civil Works/2016 P.806
ITEM-148	Equipment Rental/Depreciation	For Cross Girder Works	L.Sum	1,020,430			84,900	MLIT Cost Estimate Standard for Civil Works/2016 P.806
ITEM-149	PC Precast Panels Sealing Works		m (both sides)	20,846			1,734	MLIT Cost Estimate Standard for Civil Works/2016 P.808
ITEM-150	Temporary Storage	For PC Precast Panels	no	6,594			549	MLIT Cost Estimate Standard for Civil Works/2016 P.808
ITEM-151	PC Precast Panels Installation Works		no	305,229			25,395	MLIT Cost Estimate Standard for Civil Works/2016 P.808
ITEM-152	RC Precast Panels Joint Works		m	2,533			211	MLIT Cost Estimate Standard for Civil Works/2016 P.809
ITEM-153	Formworks	PC Slab (Border/Hanging Portion)	m2	41,393			3,444	MLIT Cost Estimate Standard for Civil Works/2016 P.809
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	2,850,050			237,124	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-⑨-11
ITEM-155	Bent Foundation Install & Removal	Plate Girder	m2	26,364			2,193	MLIT Cost Estimate Standard for Civil Works/2016 P.754
ITEM-156	Bent Install & Removal	Plate Girder	t	743,790			61,883	MLIT Cost Estimate Standard for Civil Works/2016 P.754
ITEM-157	Scaffolding Works	Plate Girder	L.Sum	11,048,717			919,253	MLIT Cost Estimate Standard for Civil Works/2016 P.746～748
ITEM-158	Anti Falling. Obj. Net & Temp. Access	Plate Girder	L.Sum	1,321,584			109,956	MLIT Cost Estimate Standard for Civil Works/2016 P.749～750
ITEM-159	In Situ Assembly Works	Plate Girder	t	20,108			1,673	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-160	Erection Works	Plate Girder	t	20,205			1,681	MLIT Cost Estimate Standard for Civil Works/2016 P.752
ITEM-161	Bolt Tightening Works	Plate Girder	no	324			27	MLIT Cost Estimate Standard for Civil Works/2016 P.752
ITEM-162	Erection Equipments Cost	Plate Girder	L.Sum	48,917,798			4,069,961	MLIT Cost Estimate Standard for Civil Works/2016 P.753
ITEM-163	Night Time Construction (Allowance)	Plate Girder	t	35,021			2,914	MLIT Cost Estimate Standard for Civil Works/2016 P<22>
ITEM-164	Bent Foundation Install & Removal	Box Girder	m2	32,969			2,743	MLIT Cost Estimate Standard for Civil Works/2016 P.754
ITEM-165	Bent Install & Removal	Box Girder	t	1,053,190			87,625	MLIT Cost Estimate Standard for Civil Works/2016 P.754
ITEM-166	Scaffolding Works	Box Girder	L.Sum	16,301,385			1,356,275	MLIT Cost Estimate Standard for Civil Works/2016 P.746～748
ITEM-167	Anti Falling. Obj. Net & Temp. Access	Box Girder	L.Sum	1,321,584			109,956	MLIT Cost Estimate Standard for Civil Works/2016 P.749～750
ITEM-168	In Situ Assembly Works	Box Girder	t	13,915			1,158	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-169	Erection Works	Box Girder	t	12,047			1,002	MLIT Cost Estimate Standard for Civil Works/2016 P.752

Unit Cost for Civil Works

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
ITEM-170	Bolt Tightening Works	Box Girder	no	319			27	MLIT Cost Estimate Standard for Civil Works/2016 P.752
ITEM-171	Erection Equipments Cost	Box Girder	L.Sum	111,079,114			9,241,782	MLIT Cost Estimate Standard for Civil Works/2016 P.753
ITEM-172	Night Time Construction (Allowance)	Box Girder	t	29,183			2,428	MLIT Cost Estimate Standard for Civil Works/2016 P<22>
ITEM-173	Base Secondary Treatment	Power Tool Cleaning / In Situ	m2	1,327			110	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4
ITEM-174	In Situ Coating	F-11 (Outward Surface)	m2	6,647		2,318	2,871	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4
ITEM-175	In Situ Coating	F-11 (Extra Protection Layer)	m2	8,775		3,761	4,491	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4
ITEM-176	In Situ Coating	F-12 (Inward Surface)	m2	6,116		1,608	2,117	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4
ITEM-177	In Situ Coating	Zinc Rich Paint (In Situ Coating Portion)	m2	2,391		650	849	MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4
ITEM-178	Elastomeric Bearing Pad	134×470×470	no	78,957		1,175,000	1,181,569	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-179	Elastomeric Bearing Pad	170×670×670	no	261,297		2,750,000	2,771,740	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-180	Elastomeric Bearing Pad	219×770×720	no	151,395		3,900,000	3,912,596	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-181	Elastomeric Bearing Pad	314×1070×1070	no	384,658		11,561,000	11,593,004	MLIT Cost Estimate Standard for Civil Works/2016 P.751
ITEM-182	Elastomeric Bearing Pad	92×470×520	no	112,066		191,000	200,324	MLIT Cost Estimate Standard for Civil Works/2016 P.807
ITEM-183	Elastomeric Bearing Pad	112×520×520	no	112,066		254,000	263,324	MLIT Cost Estimate Standard for Civil Works/2016 P.807
ITEM-184	Anchor Bar Works		kg	1,796		3,701	3,850	Composite Item
ITEM-185	Anchor Bar Installation	Vertical Installation／55＜D≦70	no	4,058			338	Bridge Erection Works Cost Estimation/2014 P.1029
ITEM-186	Anchor Bar Installation	Vertical Installation／70＜D≦85	no	5,859			487	Bridge Erection Works Cost Estimation/2014 P.1029
ITEM-187	Anchor Bar Installation	Vertical Installation／D＞85	no	8,785			731	Bridge Erection Works Cost Estimation/2014 P.1029
ITEM-188	Expansion Joint Installation Works	Joint Type 80mm	m	41,331		300,670	304,109	MLIT Cost Estimate Standard for Civil Works/2016 P.862
ITEM-189	Expansion Joint Installation Works	Joint Type 110mm	m	41,331		396,426	399,865	MLIT Cost Estimate Standard for Civil Works/2016 P.862
ITEM-190	Expansion Joint Installation Works	Joint Type 160mm	m	41,331		596,252	599,691	MLIT Cost Estimate Standard for Civil Works/2016 P.862
ITEM-191	Expansion Joint Installation Works	Joint Type 230mm	m	41,331		831,478	834,917	MLIT Cost Estimate Standard for Civil Works/2016 P.862
ITEM-192	Expansion Joint Installation Works	Joint Type 320mm	m	41,331		1,040,739	1,044,178	MLIT Cost Estimate Standard for Civil Works/2016 P.862
ITEM-193	Deck Waterproof Works		m2	46,158			3,840	MOC Cost Estimate Standard for Civil Works/1999 P.615
ITEM-194	Drainage Material	Subtructure	t	48,082,966		599,452	4,599,955	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-195	Drainage Material (Substructure)	Assembled Components	L.Sum	43,851,665		134,854	3,783,313	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-196	Drainage Material	PC Girder	t	14,627,084		640,565	1,857,539	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-197	Drainage Material (PC Girder)	Assembled Components	L.Sum	90,600,161		1,170,545	8,708,478	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-198	Drainage Material	Plate Girder	t	14,429,810		534,554	1,735,115	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-199	Drainage Material (Plate Girder)	Assembled Components	L.Sum	42,683,377		245,424	3,796,681	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-200	Drainage Material	Box Girder	t	18,977,294		556,932	2,135,843	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-201	Drainage Material (Box Girder)	Assembled Components	L.Sum	50,536,534		166,660	4,371,300	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-202	Concrete Anchor Bolt Installation Works		no	1,376		4	118	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-203	Drainage Pipe Installation	PVC Pipe	m	4,496			374	MLIT Cost Estimate Standard for Civil Works/2013 P.880
ITEM-204	Fence Installation	Wire Mesh Fence	m	82,071			6,828	Composite Item
ITEM-205	Fence Installation	Wire Mesh Gate	no	4,740,786			394,433	Composite Item
ITEM-206	Wire Mesh Fence Installation	Foundation Block	no	2,790			232	MLIT Cost Estimate Standard for Civil Works/2013 P.942
ITEM-207	Wire Mesh Fence Installation	Fence Post	no	1,296			108	MLIT Cost Estimate Standard for Civil Works/2013 P.942
ITEM-208	Wire Mesh Fence Installation	Wire Mesh	m	2,264			188	MLIT Cost Estimate Standard for Civil Works/2013 P.942
ITEM-209	New Table		place	11,745			977	MLIT Cost Estimate Standard for Civil Works/2013 P.974
ITEM-210	Water Collector Install	600×600×1100	no	471,539		3,577	42,809	Road Quantities Calculation P.1
ITEM-211	Water Collector Install	Type A	no	320,121		702	27,336	Road Quantities Calculation P.2
ITEM-212	Water Collector Install	Type B	no	731,323		2,687	63,533	Road Quantities Calculation P.3
ITEM-213	Pipe Culvert (Φ300mm)	Type A	m	80,790		953	7,675	Road Quantities Calculation P.4
ITEM-214	Pipe Culvert (Φ300mm)	Type B	m	66,842		953	6,514	Road Quantities Calculation P.5
ITEM-215	U Ditch	Type A	no	242,467		2,524	22,697	Road Quantities Calculation P.6
ITEM-216	U Ditch	Type B	no	16,741			1,393	Road Quantities Calculation P.7
ITEM-217	U Ditch	Type C	no	185,534			15,436	Road Quantities Calculation P.8
ITEM-218	U-Type Side Gutter Install	500×500 (With Cover)	m	132,856		1,659	12,713	Road Quantities Calculation P.9
ITEM-219	U-Type Side Gutter Install	500×850 (With Cover)	m	174,598		2,127	16,654	Road Quantities Calculation P.10
ITEM-220	U-Type Side Gutter Install	800×800 (With Cover)	m	195,144		2,544	18,780	Road Quantities Calculation P.11
ITEM-221	U-Type Side Gutter Install	1000×1500	m	271,777		2,867	25,479	Road Quantities Calculation P.12
ITEM-222	U-Type Side Gutter Install	1500×1500	m	301,694		3,210	28,311	Road Quantities Calculation P.13
ITEM-223	U-Type Side Gutter Install	1500×1700	m	352,922		3,490	32,853	Road Quantities Calculation P.14
ITEM-224	Concrete Cover	Type A	no	19,911		536	2,193	Road Quantities Calculation P.15
ITEM-225	Concrete Cover	Type B	no	29,235		773	3,205	Road Quantities Calculation P.16
ITEM-226	Box Culvert	1000×1000	m	413,000		7,642	42,004	Road Quantities Calculation P.17
ITEM-227	Box Culvert	1500×1000	m	484,284		9,177	49,469	Road Quantities Calculation P.18
ITEM-228	Box Culvert	1500×1500	m	577,454		10,260	58,304	Road Quantities Calculation P.19
ITEM-229	Curb Stone Installation	Type A-1	m	19,035			1,584	Road Quantities Calculation P.20
ITEM-230	Curb Stone Installation	Type A-2	m	14,650			1,219	Road Quantities Calculation P.21
ITEM-231	Curb Stone Installation	Type A-3	m	10,264			854	Road Quantities Calculation P.22
ITEM-232	Curb Stone Installation	Type C	m	11,584			964	Road Quantities Calculation P.23
ITEM-233	Traffic Regulatory Sign		no	439,541			36,570	Road Quantities Calculation P.27
ITEM-234	Traffic Warning Sign		no	821,752			68,370	Road Quantities Calculation P.27
ITEM-235	Balustrade	For Concrete Base (H=1100)	m	108,746		43	9,090	Road Quantities Calculation P.32
ITEM-236	U-Type Side Gutter Install	300×300	m	51,550			4,289	Road Quantities Calculation P.9
ITEM-237	U-Type Side Gutter Install	300×300 TYPE V	m	55,013			4,577	Road Quantities Calculation P.9
ITEM-238	Water Collector Install	600×600×500	no	314,260		539	26,685	Road Quantities Calculation P.1
ITEM-239	Water Collector Install	600×600×1200	no	222,995		645	19,198	Road Quantities Calculation P.1
ITEM-240	Pipe Culvert (Φ900mm)	360°	m	487,937		4,565	45,161	Road Quantities Calculation P.5

Item:	Overhead Cost		
Spec.:	Rate Calculation / Flyover Section	Unit: 1	L.Sum
Source::	MLIT Cost Estimate Standard for Civil Works/2016 P<65>		

Unit Price			Yen Conv.
MMK	USD	JPY	
		161,074,959	161,074,959

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Overhead Cost	Cp > 3 billions JPY	%	8.28	1.0	8.28			1,945,349,748			161,074,959	

【Notes】

Overhead Cost ＝ Construction Works Base Cost (Cp)× Overhead rate (Gp)

Overhead rate (Gp)＝ −4.63586×LOG(1,945,349,748円)＋51.34242＝8.28%

Construction Works Base Cost (Cp) more than 5 millions and less or equal to 3 billions JPY: Overhead rate (Gp)＝−4.63586× log(Cp)＋51.34242

Construction Works Base Cost (Cp)＝1,945,349,748 JPY

● Flyover Section:

Direct Construction Cost	2,007,516,804 JPY
Common Indirect Cost	116,621,821 JPY
Site Indirect Cost	348,755,578 JPY
Steel Plate Girder Fabrication	−163,513,509 JPY
Steel Box Girder Fabrication	−364,030,946 JPY
C. W. Base Cost (Flyover)	1,945,349,748 JPY

Total			161,074,959	

Item:	Overhead Cost		
Spec.:	Rate Calculation / Side Road Section	Unit: 1	L.Sum
Source::	MLIT Cost Estimate Standard for Civil Works/2016 P<65>		

Unit Price			Yen Conv.
MMK	USD	JPY	
		14,798,756	14,798,756

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Civil Works Base Cost: Flyover Section + Side Road Section】												
	Overhead Cost	Cp > 3 billions JPY	%	8.04	1.0	8.04			2,187,484,021			175,873,715	
	【Subtract the Flyover Section Overhead Cost】												
ITEM-1	Overhead Cost	Rate Calculation / Flyover Section	L.Sum	1.00	1.0	1.00			-161,074,959			-161,074,959	

【Notes】

Overhead Cost ＝ Construction Works Base Cost (Cp)× Overhead rate (Gp)

Overhead rate (Gp)＝ −4.63586×LOG(2,187,484,021円)＋51.34242＝8.04%

Construction Works Base Cost (Cp) more than 5 millions and less or equal to 3 billions JPY: Overhead rate (Gp)＝−4.63586× log(Cp)＋51.34242

Construction Works Base Cost (Cp)＝Construction Works Base Cost (Flyover Section)＋Construction Works Base Cost (Side Road Section)＝1,945,349,748＋242,134,273＝2,187,484,021 JPY

● Flyover Section:

Direct Construction Cost	2,007,516,804 JPY
Common Indirect Cost	116,621,821 JPY
Site Indirect Cost	348,755,578 JPY
Steel Plate Girder Fabrication	−163,513,509 JPY
Steel Box Girder Fabrication	−364,030,946 JPY
C. W. Base Cost (Flyover)	1,945,349,748 JPY

● Side Road Section:

Direct Construction Cost	242,134,273 JPY
Common Indirect Cost	0 JPY
Site Indirect Cost	0 JPY
C. W. Base Cost (Side Road)	242,134,273 JPY

Total			14,798,756	

Item: Site Administration Cost

Spec.: CBS Method　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<61>

Unit Price			Yen Conv.
MMK	USD	JPY	
836,418,830		184,135,742	253,725,789

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ITEM-4	Supervision Personal Cost		L.Sum	1.00	1.00	1.00	481,954,000		155,798,000	481,954,000		155,798,000	
	Safety Training Cost		L.Sum	1.00	1.00	1.00							Safety Manager Added
	Tax & Duties		L.Sum	1.00	1.00	1.00							Property Tax≒0 JPY、Vehicle Tax≒0 JPY
ITEM-8	Construction Insurance		L.Sum	1.00	1.00	1.00	11,273,720		16,235,384	11,273,720		16,235,384	
	Employee Allowances		L.Sum	1.00	1.00	1.00							Included on Labour Rate
	Retirement Allowance		L.Sum	1.00	1.00	1.00							Included on Labour Rate
	Legal Welfare Expenses		L.Sum	1.00	1.00	1.00							Included on Labour Rate
ITEM-9	Employee Benefit Expenses		L.Sum	1.00	1.00	1.00			1,704,288			1,704,288	
ITEM-10	Office Supply Cost		L.Sum	1.00	1.00	1.00			5,897,984			5,897,984	
ITEM-11	Telecomunication Cost		L.Sum	1.00	1.00	1.00			2,278,767			2,278,767	
ITEM-12	Social Expenses		L.Sum	1.00	1.00	1.00			2,221,319			2,221,319	
	Compensation Cost		L.Sum	1.00	1.00	1.00							None
	Specialized Subcontractor Cost		L.Sum	1.00	1.00	1.00							None
	Construction Registration Cost		L.Sum	1.00	1.00	1.00							Omitted
ITEM-13	Utilities Cost		L.Sum	1.00	1.00	1.00	282,535,110			282,535,110			
ITEM-14	Miscellaneous		L.Sum	1.00	1.00	1.00	60,656,000			60,656,000			
Total										836,418,830		184,135,742	

Item: Supervision Personal Cost

Spec.:

Unit: 1 L.Sum

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
481,954,000		155,798,000	195,896,573

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Japanese Personal】												
ITEM-5	Supervision Personnel Cost	Japanese Management Personnel	L.Sum	1.00	1.00	1.00			155,798,000			155,798,000	
	【Local Personal】												
ITEM-6	Supervision Personnel Cost	Local Management Personnel	L.Sum	1.00	1.00	1.00	429,032,000			429,032,000			
ITEM-7	Supervision Personnel Cost	Local Office Personnel	L.Sum	1.00	1.00	1.00	52,922,000			52,922,000			
Total										481,954,000		155,798,000	

Item: Supervision Personnel Cost

Spec.: Japanese Management Personnel　　Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
		155,798,000	155,798,000

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Japanese Management Personnel】												
SPC-2	Chief Engineer	3rd Rank	month	30.00	1.00	30.00			910,000			27,300,000	
SPC-2	Site Manager	3rd Rank	month	30.00	1.00	30.00			910,000			27,300,000	
SPC-3	Civil Engineer (Steel Bridge)	4th Rank	month	7.50	1.00	7.50			744,000			5,580,000	
SPC-2	Civil Engineer (PC Bridge)	3rd Rank	month	14.50	1.00	14.50			910,000			13,195,000	
SPC-3	Civil Engineer (General)	4th Rank	month	27.00	1.00	27.00			744,000			20,088,000	
SPC-2	Civil Engineer (Pavement)	3rd Rank	month	4.20	1.00	4.20			910,000			3,822,000	
SPC-2	Civil Engineer (Ground Improvement)	3rd Rank	month	8.30	1.00	8.30			910,000			7,553,000	
SPC-2	Office Administrator	3rd Rank	month	28.00	1.00	28.00			910,000			25,480,000	
SPC-2	Accountant	3rd Rank	month	28.00	1.00	28.00			910,000			25,480,000	
Total												155,798,000	

Item: Supervision Personnel Cost

Spec.: Local Management Personnel　　Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
429,032,000			35,695,462

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Local Management Personnel】												
LBR-101	Civil Engineer (Steel Bridge)	15 years of experience	month	7.50	1.00	7.50	2,028,000			15,210,000			
LBR-101	Civil Engineer (PC Bridge)	15 years of experience	month	14.50	1.00	14.50	2,028,000			29,406,000			
LBR-101	Civil Engineer 1 (General)	15 years of experience	month	29.00	1.00	29.00	2,028,000			58,812,000			
LBR-102	Civil Engineer 2 (General)	10 years of experience	month	28.00	1.00	28.00	1,550,000			43,400,000			
LBR-102	Civil Engineer (Road)	10 years of experience	month	27.00	1.00	27.00	1,550,000			41,850,000			
LBR-102	Civil Engineer (Equipment)	10 years of experience	month	27.00	1.00	27.00	1,550,000			41,850,000			
LBR-102	Civil Engineer (Electric)	10 years of experience	month	27.00	1.00	27.00	1,550,000			41,850,000			
LBR-102	Civil Engineer (Environmental)	10 years of experience	month	27.00	1.00	27.00	1,550,000			41,850,000			
LBR-102	Civil Engineer (Quality Control)	10 years of experience	month	27.00	1.00	27.00	1,550,000			41,850,000			
LBR-103	Surveyor		month	27.00	1.00	27.00	1,090,000			29,430,000			
LBR-104	Assistant Surveyor		month	27.00	1.00	27.00	520,000			14,040,000			
LBR-105	Drafter 1	5 years of experience	month	27.00	1.00	27.00	546,000			14,742,000			
LBR-105	Drafter 2	5 years of experience	month	27.00	1.00	27.00	546,000			14,742,000			
Total										429,032,000			

Item: Supervision Personnel Cost

Spec.: Local Office Personnel　　Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
52,922,000			4,403,110

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Local Office Personnel】												
LBR-107	Clerk		month	28.00	1.00	28.00	490,000			13,720,000			
LBR-106	Accountant		month	30.00	1.00	30.00	743,000			22,290,000			
LBR-108	Security Guard (2 staff×2 shifts)		month	28.00	1.00	28.00	266,000			7,448,000			
LBR-109	Office Boy		month	28.00	1.00	28.00	338,000			9,464,000			
Total										52,922,000			

Item: Construction Insurance

Spec.: Unit: 1 L.Sum

Source:: Insurance Company Material

Unit Price			Yen Conv.
MMK	USD	JPY	
11,273,720		16,235,384	17,173,358

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Insurance Premium	Construction Insurance	%	0.50	1.00	0.50			2,865,053,264			14,325,266	
	Insurance Premium	Material Insurance	%	0.50	1.00	0.50	2,254,744,093		382,023,660	11,273,720		1,910,118	

【Notes】

● Insurance premium for civil works is typically between 0.3%～ 0.5%

Total			11,273,720		16,235,384	

Item: Employee Benefit Expenses

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.46

Unit Price			Yen Conv.
MMK	USD	JPY	
		1,704,288	1,704,288

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Employee Benefit Expenses		%	0.89	1.00	0.89			191,493,000			1,704,288	

【Notes】

Employee Benefit Expenses (Thousand JPY)＝A×B／100

A: Japanese Management Personnel Salary Sum＋Local Management Personnel Salary Sum (Excluding Clerk, Driver, Officeboy, etc.) ⇒ A＝155,798,000＋35,695,462＝191,493 Thousand JPY

Japanese Management Personnel Salary Sum＝155,798,000 JPY (Item-5)

Local Management Personnel Salary Sum＝35,695,462 JPY (Item-6)

B: Employee Benefit Expenses Rate(%)＝12,750／A＋0.82＝12,750／191,493＋0.82＝0.89%

However, if A≦15,000 Thousand JPY then B=1.67%

Total			1,704,288	

Item: Office Supply Cost

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.47

Unit Price			Yen Conv.
MMK	USD	JPY	
		5,897,984	5,897,984

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Office Suppy Cost		%	3.08	1.00	3.08			191,493,000			5,897,984	

【Notes】

Office Supply Cost (Thousand JPY)＝A×B／100

A: Japanese Management Personnel Salary Sum＋Local Management Personnel Salary Sum (Excluding Clerk, Driver, Officeboy, etc.) ⇒ A＝155,798,000＋35,695,462＝191,493 Thousand JPY

Japanese Management Personnel Salary Sum＝155,798,000 JPY (Item-5)

Local Management Personnel Salary Sum＝35,695,462 JPY (Item-6)

B: Office Supply Cost Rate(%)＝30,134／A＋2.92＝30,134／191,493＋2.92＝3.08%

However, if A≦20,000 Thousand JPY then B=4.43%

Total			5,897,984	

Item: Telecomunication Cost

Spec.:

Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.47

Unit Price			Yen Conv.
MMK	USD	JPY	
		2,278,767	2,278,767

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Telecomunication Cost		%	1.19	1.00	1.19			191,493,000			2,278,767	

【Notes】

Telecomunication Cost (Thousand JPY)＝A×B／100

A: Japanese Management Personnel Salary Sum＋Local Management Personnel Salary Sum (Excluding Clerk, Driver, Officeboy, etc.) ⇒ A＝155,798,000＋35,695,462＝191,493 Thousand JPY

Japanese Management Personnel Salary Sum＝155,798,000 JPY (Item-5)

Local Management Personnel Salary Sum＝35,695,462 JPY (Item-6)

B: Telecomunication Cost Rate(%)＝21,199／A＋1.076＝21,199／191,493＋1.076＝1.19% (Asia Region)

However, if A≦30,000 Thousand JPY then B=1.78%

Total			2,278,767	

Item: Social Expenses

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 (Equipment Procurement) P.49

Unit Price			Yen Conv.
MMK	USD	JPY	
		2,221,319	2,221,319

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Social Expenses		%	1.16	1.00	1.16			191,493,000			2,221,319	

【Notes】

Social Expenses (Thousand JPY)＝A×B／100

A: Japanese Management Personnel Salary Sum＋Local Management Personnel Salary Sum (Excluding Clerk, Driver, Officeboy, etc.) ⇒ A＝155,798,000＋35,695,462＝191,493 Thousand JPY

Japanese Management Personnel Salary Sum＝155,798,000 JPY (Item-5)

Local Management Personnel Salary Sum＝35,695,462 JPY (Item-6)

B: Social Expenses Rate(%)＝28,244／A＋1.017＝28,244／191,493＋1.017＝1.16%

However, if A≦15,000 Thousand JPY then B=2.90%

Total			2,221,319	

Item: Utilities Cost

Spec.:

Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
282,535,110			23,506,921

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Electricity】												
EOP-29	Generator 1 & 2	20/25kVA	month	58.00	1.00	58.00	1,791,660			103,916,280			Refer to the Construction Schedule
EOP-30	Generator 3	100/125kVA	month	29.00	1.00	29.00	6,159,270			178,618,830			Refer to the Construction Schedule
Total										282,535,110			

Item: Miscellaneous

Spec.:

Unit: 1 L.Sum

Source:: JICA Study Team

Unit Price			Yen Conv.
MMK	USD	JPY	
60,656,000			5,046,579

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	HIV Prevention Campaign		P.Sum	1.00	1.00	1.00	47,076,000			47,076,000			JICA Study Team
	Environmental Monitoring		P.Sum	1.00	1.00	1.00	13,580,000			13,580,000			JICA Study Team
Total										60,656,000			

Item: Overseas Travel Cost

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.70

Unit Price			Yen Conv.
MMK	USD	JPY	
		14,711,640	14,711,640

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【International Travel】												
QTN-7	Chief Engineer	3rd Rank	round trip	5.00	1.0	5.00			485,128			2,425,640	Economic Class / 12 months valid
QTN-7	Site Manager	3rd Rank	round trip	5.00	1.0	5.00			485,128			2,425,640	Economic Class / 12 months valid
QTN-7	Civil Engineer (Steel Bridge)	4th Rank	round trip	1.00	1.0	1.00			485,128			485,128	Economic Class / 12 months valid
QTN-7	Civil Engineer (PC Bridge)	3rd Rank	round trip	2.00	1.0	2.00			485,128			970,256	Economic Class / 12 months valid
QTN-7	Civil Engineer (General)	4th Rank	round trip	4.00	1.0	4.00			485,128			1,940,512	Economic Class / 12 months valid
QTN-7	Civil Engineer (Pavement)	3rd Rank	round trip	2.00	1.0	2.00			485,128			970,256	Economic Class / 12 months valid
QTN-7	Civil Engineer (Ground Improvement)	3rd Rank	round trip	1.00	1.0	1.00			485,128			485,128	Economic Class / 12 months valid
QTN-7	Office Administrator	3rd Rank	round trip	5.00	1.0	5.00			485,128			2,425,640	Economic Class / 12 months valid
QTN-7	Accountant	3rd Rank	round trip	5.00	1.0	5.00			485,128			2,425,640	Economic Class / 12 months valid
	【Domestic Travel】												
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	30.00	1.0	30.00			5,260			157,800	

【Notes】

- Dispatched Japanese staff Class 2 or superior: Discounted business class ticket (P.70)
- Dispatched Japanese staff Class 3 or inferior / Specialist worker: Discounted economic class ticket (P.70)
- Japan domestic travel: Tokyo Station⇔Narita Air. Term. 1 Station (Keisei Skyliner) (P.70)

Total			14,711,640	

Item: Overseas Allowance Cost

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.71

Unit Price			Yen Conv.
MMK	USD	JPY	
		56,087,280	56,087,280

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
SPC-4	Chief Engineer	3rd Rank	month	30.00	1.0	30.00			327,600			9,828,000	910,000×0.6×0.6=327,600 JPY
SPC-4	Site Manager	3rd Rank	month	30.00	1.0	30.00			327,600			9,828,000	910,000×0.6×0.6=327,600 JPY
SPC-5	Civil Engineer (Steel Bridge)	4th Rank	month	7.50	1.0	7.50			267,840			2,008,800	744,000×0.6×0.6=267,840 JPY
SPC-4	Civil Engineer (PC Bridge)	3rd Rank	month	14.50	1.0	14.50			327,600			4,750,200	910,000×0.6×0.6=327,600 JPY
SPC-5	Civil Engineer (General)	4th Rank	month	27.00	1.0	27.00			267,840			7,231,680	744,000×0.6×0.6=267,840 JPY
SPC-4	Civil Engineer (Pavement)	3rd Rank	month	4.20	1.0	4.20			327,600			1,375,920	910,000×0.6×0.6=327,600 JPY
SPC-4	Civil Engineer (Ground Improvement)	3rd Rank	month	8.30	1.0	8.30			327,600			2,719,080	910,000×0.6×0.6=327,600 JPY
SPC-4	Office Administrator	3rd Rank	month	28.00	1.0	28.00			327,600			9,172,800	910,000×0.6×0.6=327,600 JPY
SPC-4	Accountant	3rd Rank	month	28.00	1.0	28.00			327,600			9,172,800	910,000×0.6×0.6=327,600 JPY

【Notes】

● Overseas assignment allowance (month)＝Base salary (month)×A×B

A：Base salary calculation rate＝1.0 (100%)※

B：Allowance rate＝0.6 (60%)

Total			56,087,280	

Item: Supervision Vehicle Cost

Spec.:

Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.72

Unit Price			Yen Conv.
MMK	USD	JPY	
202,380,920			16,838,093

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
QTN-3	Supervision Vehicle 1	Driver & Fuel Included	month	30.00	1.0	30.00	2,380,952			71,428,560			Refer to the Construction Schedule
QTN-3	Supervision Vehicle 2	Driver & Fuel Included	month	28.00	1.0	28.00	2,380,952			66,666,656			Refer to the Construction Schedule
QTN-3	Supervision Vehicle 3	Driver & Fuel Included	month	27.00	1.0	27.00	2,380,952			64,285,704			Refer to the Construction Schedule
Total										202,380,920			

Item: Quality Control Cost

Spec.: Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.73

Unit Price			Yen Conv.
MMK	USD	JPY	
1,976,190		6,808,910	6,973,329

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Personnel Expenses】												
SPC-1	Quality Control Engineer 1	2nd Rank	month	1.17	1.0	1.17			1,024,000			1,198,080	(1＋5＋1)／30×5＝1.17 month
SPC-2	Quality Control Engineer 2	3rd Rank	month	1.17	1.0	1.17			910,000			1,064,700	(1＋5＋1)／30＝1.17 month
	【Overseas Travel Cost】												
QTN-5	Air Ticket	Business Class / 6 months valid	round trip	5.00	1.0	5.00			529,228			2,646,140	Business Class / 6 months valid
QTN-6	Air Ticket	Economic Class / 2 months valid	round trip	5.00	1.0	5.00			185,878			929,390	Economic Class / 2 months valid
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	10.00	1.0	10.00			5,260			52,600	
	【Overseas Allowance Cost】												
SPC-6	Travel Allowance	2nd Rank	day	35.00	1.0	35.00			4,500			157,500	(1＋5＋1)×5＝35.00 day
SPC-7	Travel Allowance	3rd Rank	day	35.00	1.0	35.00			3,800			133,000	(1＋5＋1)×5＝35.00 day
SPC-8	Accommodation Fee	2nd Rank	day	25.00	1.0	25.00			13,500			337,500	5×5＝25.00 day
SPC-9	Accommodation Fee	3rd Rank	day	25.00	1.0	25.00			11,600			290,000	5×5＝25.00 day
	【Site Transport Cost】												
QTN-3	Supervision Vehicle	Driver & Fuel Included	month	0.83	1.0	0.83	2,380,952			1,976,190			5／30×5＝0.83 month
Total										1,976,190		6,808,910	

Item: Defect Inspection Cost

Spec.:

Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.73

Unit Price			Yen Conv.
MMK	USD	JPY	
238,095		399,638	419,448

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Personnel Expenses】												
SPC-2	Defect Inspection Engineer	3rd Rank	month	0.17	1.0	0.17			910,000			154,700	(1＋3＋1)／30×1＝0.17 month
	【Overseas Travel Cost】												
QTN-6	Air Ticket	Economic Class / 2 months valid	round trip	1.00	1.0	1.00			185,878			185,878	Economic Class / 2 months valid
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	1.00	1.0	1.00			5,260			5,260	
	【Overseas Allowance Cost】												
SPC-7	Travel Allowance	3rd Rank	day	5.00	1.0	5.00			3,800			19,000	(1＋3＋1)×1＝5.00 day
SPC-9	Accommodation Fee	3rd Rank	day	3.00	1.0	3.00			11,600			34,800	3×1＝3.00 day
	【Site Transport Cost】												
QTN-3	Supervision Vehicle	Driver & Fuel Included	month	0.10	1.0	0.10	2,380,952			238,095			3／30×1＝0.10 month
Total										238,095		399,638	

Item: Common Indirect Cost (Rate Calculation)

Spec.: Rate Calculation / Flyover Section　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<36>

Unit Price			Yen Conv.
MMK	USD	JPY	
		116,621,821	116,621,821

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Common Indirect Cost	P > 1 billion JPY	%	6.06	1.3	7.88			1,479,972,349			116,621,821	

【Notes】

Project Class: Steel Bridge Erection Works

Common Indirect Cost ＝ Common Works Applicable Value (P)× Common Indirect Rate (Kr)×Correction Factor

Common Works Applicable Value (P) more than 1 billion JPY: Common Indirect Rate (Kr)＝6.06%

Common Works Applicable Value (P)＝ Common Works Applicable Value (Flyover Section)＋ Common Works Applicable Value (Side Road Section)＝1,479,972,349＋242,134,273＝1,722,106,622 JPY

Urban Area: Correction Factor＝1.3 P<34>

● Flyover Section:

Direct Construction Cost	2,007,516,804 JPY
Steel Plate Girder Fabrication	−163,513,509 JPY
Steel Box Girder Fabrication	−364,030,946 JPY
C. W. Applicable Value (Flyover)	1,479,972,349 JPY

● Side Road Section:

Direct Construction Cost	242,134,273 JPY
C. W. Applicable Value (Side Road)	242,134,273 JPY

Total			116,621,821	

Item: Common Indirect Cost (Rate Calculation)

Spec.: Rate Calculation / Side Road Section Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<36>

Unit Price			Yen Conv.
MMK	USD	JPY	
		19,080,181	19,080,181

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Common Indirect Cost	P > 1 billion JPY	%	6.06	1.3	7.88			242,134,273			19,080,181	

【Notes】

Project Class: Steel Bridge Erection Works

Common Indirect Cost ＝ Common Works Applicable Value (P)× Common Indirect Rate (Kr)×Correction Factor

Common Works Applicable Value (P) more than 1 billion JPY: Common Indirect Rate (Kr)＝6.06%

Common Works Applicable Value (P)＝ Common Works Applicable Value (Flyover Section)＋ Common Works Applicable Value (Side Road Section)＝1,479,972,349＋242,134,273＝1,722,106,622 JPY

Urban Area: Correction Factor＝1.3 P<34>

● Flyover Section:

Direct Construction Cost	2,007,516,804 JPY
Steel Plate Girder Fabrication	−163,513,509 JPY
Steel Box Girder Fabrication	−364,030,946 JPY
C. W. Applicable Value (Flyover)	1,479,972,349 JPY

● Side Road Section:

Direct Construction Cost	242,134,273 JPY
C. W. Applicable Value (Side Road)	242,134,273 JPY

Total			19,080,181	

Item: Safety Personnel Cost

Spec.: Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
41,850,000		32,901,552	36,383,472

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Japanese Personnel】												
SPC-2	Civil Engineer (Safety)	3rd Rank	month	25.00	1.0	25.00			910,000			22,750,000	
	【Overseas Travel Cost】												
QTN-7	Air Ticket	Economic Class / 12 months valid	round trip	4.00	1.0	4.00			485,128			1,940,512	Economic Class / 12 months valid
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	4.00	1.0	4.00			5,260			21,040	
	【Overseas Allowance Cost】												
SPC-4	Overseas Assignment Allowance	3rd Rank	month	25.00	1.0	25.00			327,600			8,190,000	910,000×0.6×0.6=327,600 JPY
	【Local Personal】												
LBR-102	Civil Engineer (Safety)	10 years of experience	month	27.00	1.0	27.00	1,550,000			41,850,000			
Total										41,850,000		32,901,552	

Item: Traffic Control Personnel Cost

Spec.: Unit: 1 L.Sum

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
46,175,000			3,841,760

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Local Personal】												
LBR-102	Civil Engineer (Traffic)	10 years of experience	month	25.00	1.0	25.00	1,550,000			38,750,000			
	【Local Personal】												
LBR-110	Flagman (4 staff)		month	25.00	1.0	25.00	297,000			7,425,000			
Total										46,175,000			

Item: Project Sign Board

Spec.:

Unit: 1 L.Sum

Source:: JICA Cost Estimate & Design Manual/2016 P.68

Unit Price			Yen Conv.
MMK	USD	JPY	
9,000,000			748,800

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
QTN-1	Project Sign Board	1.8x3.6m	no	2.00	1.0	2.00	2,100,000			4,200,000			
QTN-2	Project Sign Board	0.9x1.8m	no	4.00	1.0	4.00	1,200,000			4,800,000			
Total										9,000,000			

Item: Foundation Works Equip.

Spec.: Japanese Procurement　　Unit: 98 no

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
		416,291	416,291

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Equipment Rent】												
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	total days	419.00	1.0	419.00			35,200			14,748,800	
ERN-22	Reverse Circulation Drill	Φ3200mm	total days	419.00	1.0	419.00			29,300			12,276,700	
	【Shipping Cost】												
QTN-8	Bulk or RO/RO	Japan ～ Project Site	F/T	43.60	1.0	43.60			22,000			959,200	All Shipping Cost Included
	【Insurance】												
	Insurance Premium		%	0.35	1.0	0.35			76,828,098			268,898	
	【Japanese Technician】												
SKW-2	Foreman	Reverse Circulation Method	total days	314.00	1.0	314.00			27,075			8,501,550	
	Overseas Assignment Allowance		total days	314.00	1.0	314.00			9,747			3,060,558	27,075×0.6×0.6=9,747 JPY
QTN-7	Air Ticket	Economic Class / 12 months valid	round trip	2.00	1.0	2.00			485,128			970,256	Economic Class / 12 months valid
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	2.00	1.0	2.00			5,260			10,520	
Total												40,796,482	

Item: Ground Improv. Works Equip.

Spec.: Japanese Procurement　　Unit: 1,416 no

Source:: Table 4-2 Supervision Personnel / Construction Machinary Assignment Plan

Unit Price			Yen Conv.
MMK	USD	JPY	
		54,599	54,599

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Equipment Rent】												
ERN-23	Deep Layer Mixing Machine	2 axis･1200mm･Up to 20m	total days	354.00	1.0	354.00			139,000			49,206,000	
ERN-24	Cement Slurry Plant	20m3/h	total days	354.00	1.0	354.00			31,700			11,221,800	
	【Shipping Cost】												
QTN-8	Bulk or RO/RO	Japan ～ Project Site	F/T	280.00	1.0	280.00			22,000			6,160,000	All Shipping Cost Included
	【Insurance】												
	Insurance Premium		%	0.35	1.0	0.35			430,065,228			1,505,228	
	【Japanese Technician】												
SKW-1	Equip. Operator	Deep Layer Mixing Machine	total days	249.00	1.0	249.00			25,774			6,417,726	
	Overseas Assignment Allowance		total days	249.00	1.0	249.00			9,279			2,310,471	25,774×0.6×0.6=9,279 JPY
QTN-7	Air Ticket	Economic Class / 12 months valid	round trip	1.00	1.0	1.00			485,128			485,128	Economic Class / 12 months valid
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip	1.00	1.0	1.00			5,260			5,260	
Total												77,311,613	

Item: Road Bed Construction Works

Spec.: Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.37

Unit Price			Yen Conv.
MMK	USD	JPY	
833			69

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bulldozer Levelling】												
EOP-1	Bulldozer Operation	15t	day	0.14	1/ 85%	0.16	323,350			51,736			100／D＝100／690＝0.14 days
LBR-3	Unskilled Labour		day	0.20	1.0	0.20	13,500			2,700			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Tire Roller Compaction】												
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.08	1/ 85%	0.09	321,233			28,911			100／D＝100／1,330＝0.08 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Roadbed material】												
MAT-3011	Roadbed material	C-40	m3	0.00	1.27	0.00	46,500						Loss Rate = +0.27 (Table 4.1 / P.494)

【Notes】

【Bulldozer Levelling】

● Daily Construction Productivity (D)＝690 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

【Tire Roller Compaction】

● Daily Construction Productivity (D)＝1,330 m3 (Table 3.1 / P.36)

Condition ① Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										83,347			

Item: Road Bed Construction Works

Spec.: Material From Borrow Pit　　Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.37

Unit Price			Yen Conv.
MMK	USD	JPY	
19,883			1,654

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bulldozer Levelling】												
EOP-1	Bulldozer Operation	15t	day	0.14	1/ 85%	0.16	323,350			51,736			100／D＝100／690＝0.14 days
LBR-3	Unskilled Labour		day	0.20	1.0	0.20	13,500			2,700			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Tire Roller Compaction】												
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.08	1/ 85%	0.09	321,233			28,911			100／D＝100／1,330＝0.08 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Roadbed material】												
MAT-3010	Backfilling material		m3	100.00	1.27	127.00	15,000			1,905,000			Loss Rate = +0.27 (Table 4.1 / P.494)

【Notes】

【Bulldozer Levelling】

● Daily Construction Productivity (D)＝690 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

【Tire Roller Compaction】

● Daily Construction Productivity (D)＝1,330 m3 (Table 3.1 / P.36)

Condition ① Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total	1,988,347			

Item: Subgrade Construction Works

Spec.: Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.37

Unit Price			Yen Conv.
MMK	USD	JPY	
1,394			116

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bulldozer Levelling】												
EOP-1	Bulldozer Operation	15t	day	0.19	1/ 85%	0.22	323,350			71,137			100／D＝100／540＝0.19 days
LBR-3	Unskilled Labour		day	0.30	1.0	0.30	13,500			4,050			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Tire Roller Compaction】												
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.17	1/ 85%	0.20	321,233			64,247			100／D＝100／580＝0.17 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Roadbed material】												
MAT-3011	Roadbed material	C-40	m3	0.00	1.27	0.00	46,500						Loss Rate = +0.27 (Table 4.1 / P.494)

【Notes】

【Bulldozer Levelling】

● Daily Construction Productivity (D)＝540 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

【Tire Roller Compaction】

● Daily Construction Productivity (D)＝580 m3 (Table 3.1 / P.36)

Condition ① Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										139,434			

Item: Subgrade Construction Works

Spec.: Material From Borrow Pit　　Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.37

Unit Price			Yen Conv.
MMK	USD	JPY	
20,444			1,701

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bulldozer Levelling】												
EOP-1	Bulldozer Operation	15t	day	0.19	1/ 85%	0.22	323,350			71,137			100／D＝100／540＝0.19 days
LBR-3	Unskilled Labour		day	0.30	1.0	0.30	13,500			4,050			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Tire Roller Compaction】												
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.17	1/ 85%	0.20	321,233			64,247			100／D＝100／580＝0.17 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Roadbed material】												
MAT-3010	Backfilling material		m3	100.00	1.27	127.00	15,000			1,905,000			Loss Rate = +0.27 (Table 4.1 / P.494)

【Notes】

【Bulldozer Levelling】

● Daily Construction Productivity (D)＝540 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

【Tire Roller Compaction】

● Daily Construction Productivity (D)＝580 m3 (Table 3.1 / P.36)

Condition ① Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										2,044,434			

Item: Backhoe Mixing Stabilization Works

Spec.: Cement 60 kg/m3 Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
13,241			1,102

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.56	1/ 75%	0.75	24,300			18,225			1×100／D＝1×100／180＝0.56 days
LBR-3	Unskilled Labour		day	1.67	1/ 75%	2.23	13,500			30,105			3×100／D＝3×100／0＝1.67 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	6.000	1.0	6.000	106,053			636,318			
EOP-7	Backhoe Operation	0.5m3 / Lifting Capacity 2.9t	day	0.56	1/ 75%	0.75	368,334			276,251			100／D＝100／180＝0.56 days
EOP-3	Backhoe Operation	0.28m3	day	0.56	1/ 75%	0.75	163,069			122,302			100／D＝100／180＝0.56 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.56	1/ 75%	0.75	321,233			240,925			100／D＝100／180＝0.56 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (D)＝180 m3 (Table 2.3 / P.51)

Condition ① Productivity (D) includes stabilizer material spraying, mixing, leveling and compaction

Condition ② Subgrade: Mixing Deep ＝ Less or equal 1.0m

●Soil Stabilizer＝60×100＝6,000 kg ⇒ 6.000 t

Condition ① Improvement Rate = 60 kg/m3

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.1/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										1,324,126			

Item:	Backhoe Mixing Stabilization Works		
Spec.:	Imp. Deep = 1.3m ・ Cement 230 kg/m3	Unit: 100	m3
Source::	MLIT Cost Estimate Standard for Civil Works/2012 P.52		

Unit Price			Yen Conv.
MMK	USD	JPY	
33,330			2,773

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.35	1/ 75%	1.80	24,300			43,740			1×100／D＝1×100／74＝1.35 days
LBR-2	Skilled Labour		day	1.35	1/ 75%	1.80	16,200			29,160			1×100／D＝1×100／1＝1.35 days
LBR-3	Unskilled Labour		day	1.35	1/ 75%	1.80	13,500			24,300			1×100／D＝1×100／1＝1.35 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	23.000	1.0	23.000	106,053			2,439,219			
EOP-8	Backhoe Operation	0.8m3 / Lifting Capacity 2.9t	day	1.35	1/ 75%	1.80	368,008			662,414			100／D＝100／74＝1.35 days
EOP-19	Vibration Roller Operation	Hand Guide 0.8～1.1t	day	1.35	1/ 75%	1.80	74,557			134,203			100／D＝100／74＝1.35 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (D)＝74 m3 (Table 2.3 / P.51)

Condition ① Productivity (D) includes stabilizer material spraying, mixing, leveling and compaction

Condition ② For Structure: Mixing Deep ＝ 1m < L ≤ 2m

●Soil Stabilizer＝180×100＝18,000 kg ⇒ 18.000 t

Condition ① Improvement Rate = 230 kg/m3

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.1/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total	3,333,036			

Item: Backhoe Excavation

Spec.: 0.8m3 Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.20

Unit Price			Yen Conv.
MMK	USD	JPY	
2,801			233

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
EOP-6	Backhoe Operation	0.8m3	day	0.56	1/ 75%	0.75	368,008			276,006			100／D＝100／0＝0.56 days
LBR-3	Unskilled Labour		day	0.30	1.0	0.30	13,500			4,050			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (D)＝180m3 (Table 4.4 / P.17)

Condition ① Excavation Type: Standard ／ Sand, sandy, gravel, cohesive soil type

Condition ② Working Environment: Restricted

Condition ③ Temporary Retaining Wall Restriction: Self-Supported Type

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total	280,056			

Item: Excavation Auxiliary Labour

Spec.: Base Adjusting　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.20

Unit Price			Yen Conv.
MMK	USD	JPY	
61			5

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-3	Unskilled Labour		day	0.30	1.50	0.45	13,500			6,075			Simple Labour Corr. = 1.50 (P.39)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										6,075			

Item: Tamper Compacting

Spec.: Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.22

Unit Price			Yen Conv.
MMK	USD	JPY	
1,561			130

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-3	Unskilled Labour		day	3.00	1.0	3.00	13,500			40,500			
EOP-21	Tamper Operation	60～80kg	day	3.00	1/ 85%	3.53	32,737			115,562			Simple Equipment Corr. = 1/ 85% (P.51)
Total										156,062			

Item: Backfilling Type C

Spec.: Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.23

Unit Price			Yen Conv.
MMK	USD	JPY	
5,166			430

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Backfilling Works】												
LBR-3	Unskilled Labour		day	4.00	1.0	4.00	13,500			54,000			
EOP-6	Backhoe Operation	0.8m3	h	4.00	1/ 75%	5.33	58,693			312,834			General Equipment Corr. = 1/ 75% (P.51)
EOP-19	Vibration Roller Operation	Hand Guide 0.8～1.1t	day	1.35	1/ 75%	1.80	74,557			134,203			General Equipment Corr. = 1/ 75% (P.51)
ITEM-35	Tamper Compacting		m3	10.00	1.0	10.00	1,561			15,610			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										516,647			

Item: Backfilling Type D

Spec.: Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.23

Unit Price			Yen Conv.
MMK	USD	JPY	
5,035			419

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Backfilling Works】												
LBR-3	Unskilled Labour		day	4.00	1.0	4.00	13,500			54,000			
EOP-4	Backhoe Operation	0.45m3	h	6.00	1/ 75%	8.00	36,673			293,384			General Equipment Corr. = 1/ 75% (P.51)
ITEM-35	Tamper Compacting		m3	100.00	1.0	100.00	1,561			156,100			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										503,484			

Item: Surplus Transport

Spec.: Sand Soil　　Unit: 100 m3

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
4,674			389

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Transport】												
EOP-9	Dump Truck Operation	10t	day	2.10	1.0	2.10	194,375			408,188			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Material Compaction】												
ERN-2	Bulldozer	21t	day	0.14	1/ 85%	0.16	353,080			56,493			100／D＝100／690＝0.14 days
LBR-3	Unskilled Labour		day	0.20	1.0	0.20	13,500			2,700			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

【Transport】 (MLIT Cost Estimate Standard for Civil Works/2013 P.19)

● Transport Productivity 100 m3 (D)＝2.1 m3 (Table 4.9 / P.18)

Condition ① Urban Area

Condition ② Transport Distance＝Less than 6.0km

● JICA Correction Coefficient: Not Applicable

【Bulldozer Compaction】 (MLIT Cost Estimate Standard for Civil Works/2012 P.37)

● Daily Construction Productivity (D)＝690 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total	467,381			

Item: Surplus Transport

Spec.: Asphalt / Concrete Rubble　　Unit: 100 m3

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
16,511			1,374

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Transport】												
EOP-9	Dump Truck Operation	10t	day	6.30	1.3	8.19	194,375			1,591,931			Loss Rate = +0.30 (Table 7.3 / P.38)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Material Compaction】												
ERN-2	Bulldozer	21t	day	0.14	1/ 85%	0.16	353,080			56,493			100／D＝100／690＝0.14 days
LBR-3	Unskilled Labour		day	0.20	1.0	0.20	13,500			2,700			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

【Transport】 (MLIT Cost Estimate Standard for Civil Works/2013 P.19)

● Transport Productivity 100 m3 (D)＝6.3 m3 (Table 4.9 / P.18)

Condition ① Urban Area

Condition ② Transport Distance＝Less than 49.5km

In case of asphalt or concrete rubble transport, the productivity rate is multiplied by 1.30 (P.38)

● JICA Correction Coefficient: Not Applicable

【Bulldozer Compaction】 (MLIT Cost Estimate Standard for Civil Works/2012 P.37)

● Daily Construction Productivity (D)＝690 m3 (Table 3.1 / P.36)

Condition ① Subgrade Works: Less than 10,000m3

Condition ② Working Environment: Standard

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,651,124			

Item: Demolition Works

Spec.: Unreinf. Conc. Structure (Including Disposal) Unit: 10 m3

Source:: MOC Cost Estimate Standard for Civil Works/1993 P.145

Unit Price			Yen Conv.
MMK	USD	JPY	
14,328			1,192

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Giant Breaker Demolition】												
LBR-1	Foreman		day	0.50	1.0	0.50	24,300			12,150			
LBR-3	Unskilled Labour		day	0.80	1.0	0.80	13,500			10,800			
EOP-27	Giant Breaker Operation	600～800kg	h	2.50	1/ 75%	3.33	671			2,234			General Equipment Corr. = 1/ 75% (P.51)
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	25,184			252			
	【Concrete Rubble Disposal】												
EOP-6	Backhoe Operation	0.8m3	h	0.47	1/ 75%	0.63	58,693			36,977			General Equipment Corr. = 1/ 75% (P.51)
EOP-9	Dump Truck Operation	10t	h	2.22	1.0	2.22	32,778			72,767			
	【Auxiliar Labour】												
LBR-3	Unskilled Labour		day	0.40	1.50	0.60	13,500			8,100			Simple Labour Corr. = 1.50 (P.39)

【Notes】

● Backhoe Capacity (P.20)

Backhoe Working Time＝10/21.2＝0.47 h

Excavation Volume＝3,600×q×f×E／Cm＝3,600×0.59×1.0×0.30／30＝21.2 m3/h

Excavation Volume per Cicle (q)＝qo×K＝0.60×0.98=0.59 m3 (P.20)

Bucket Capacity (qo)＝0.60 m3, Bucket Coefficient (K)＝0.98

Conversion Factor (f)＝1.0, Working Efficiency (E)＝0.30 (P.145)

Time Required per Cicle (Cm)＝30 s (Rotation 90°) (P.20)

● Dump Truck Capacity (P.22)

Dump Truck Transport Working Time＝10/4.5＝2.22 h

Transport Volume＝60×q×f×E／Cm＝60×4.0×1.0×0.90／47.8＝4.5 m3/h

Transport Capacity (q)＝qo／K＝10／2.5=4.0 m3 (P.22)

Transport Capacity per Trip (qo)＝10 t, Volume per Unit Weight (K)＝2.5 m3/t

Conversion Factor (f)＝1.0 (P.145), Working Efficiency (E)＝0.90 (P.23)

Time Required per Cicle (Cm)＝β×L＋α＝5.3×6.0＋16＝47.8 min

Transport Zone Coefficient (β)＝5.3 (Urban Area: More or equal 30% and less than 70% Standard Value)

Transport Distance (L)＝6.0 km

Supplementary Activities Coefficient (α)＝16 (Backhoe 0.6m3)

Total										143,280			

Item: Demolition Works

Spec.: Reinf. Conc. Structure (Including Disposal) Unit: 10 m3

Source:: MOC Cost Estimate Standard for Civil Works/1993 P.145

Unit Price			Yen Conv.
MMK	USD	JPY	
17,716			1,474

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Giant Breaker Demolition】												
LBR-1	Foreman		day	0.60	1.0	0.60	24,300			14,580			
LBR-10	Welder		day	0.70	1.0	0.70	21,600			15,120			
LBR-3	Unskilled Labour		day	1.70	1.0	1.70	13,500			22,950			
EOP-27	Giant Breaker Operation	600～800kg	h	4.90	1/ 75%	6.53	671			4,382			General Equipment Corr. = 1/ 75% (P.51)
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	4.00	1.0	4.00	57,032			2,281			
	【Concrete Rubble Disposal】												
EOP-6	Backhoe Operation	0.8m3	h	0.47	1/ 75%	0.63	58,693			36,977			General Equipment Corr. = 1/ 75% (P.51)
EOP-9	Dump Truck Operation	10t	h	2.22	1.0	2.22	32,778			72,767			
	【Auxiliar Labour】												
LBR-3	Unskilled Labour		day	0.40	1.50	0.60	13,500			8,100			Simple Labour Corr. = 1.50 (P.39)

【Notes】

● Backhoe Capacity (P.20)

Backhoe Working Time＝10/21.2＝0.47 h

Excavation Volume＝3,600×q×f×E／Cm＝3,600×0.59×1.0×0.30／30＝21.2 m3/h

Excavation Volume per Cicle (q)＝qo×K＝0.60×0.98=0.59 m3 (P.20)

Bucket Capacity (qo)＝0.60 m3, Bucket Coefficient (K)＝0.98

Conversion Factor (f)＝1.0, Working Efficiency (E)＝0.30 (P.145)

Time Required per Cicle (Cm)＝30 s (Rotation 90°) (P.20)

● Dump Truck Capacity (P.22)

Dump Truck Transport Working Time＝10/4.5＝2.22 h

Transport Volume＝60×q×f×E／Cm＝60×4.0×1.0×0.90／47.8＝4.5 m3/h

Transport Capacity (q)＝qo／K＝10／2.5=4.0 m3 (P.22)

Transport Capacity per Trip (qo)＝10 t, Volume per Unit Weight (K)＝2.5 m3/t

Conversion Factor (f)＝1.0 (P.145), Working Efficiency (E)＝0.90 (P.23)

Time Required per Cicle (Cm)＝β×L＋α＝5.3×6.0＋16＝47.8 min

Transport Zone Coefficient (β)＝5.3 (Urban Area: More or equal 30% and less than 70% Standard Value)

Transport Distance (L)＝6.0 km

Supplementary Activities Coefficient (α)＝16 (Backhoe 0.6m3)

Total										177,157			

Item: Draining Pipe Installation Works

Spec.: PVC 50mm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.56

Unit Price			Yen Conv.
MMK	USD	JPY	
3,347			278

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.40	1.0	0.40	24,300			9,720			
LBR-3	Unskilled Labour		day	0.90	1.0	0.90	13,500			12,150			
EOP-6	Backhoe Operation	0.8m3	h	4.00	1/ 75%	5.33	58,693			312,834			General Equipment Corr. = 1/ 75% (P.51)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										334,704			

Item: Filter Material Installing Works

Spec.: Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.89

Unit Price			Yen Conv.
MMK	USD	JPY	
12,610			1,049

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.30	1.50	0.45	24,300			10,935			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.10	1.50	0.15	16,200			2,430			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.70	1.50	1.05	13,500			14,175			Simple Labour Corr. = 1.50 (P.39)
MAT-3007	Filter		m3	10.00	1.20	12.00	3,180			38,160			Loss Rate = +0.20 (Table 3.6 / P.121)
EOP-4	Backhoe Operation	0.45m3	h	1.60	1.0	1.60	36,673			58,677			
SUN-9	Sundry Expenses	On labour and equipment operation costs	%	2.00	1.0	2.00	86,217			1,724			
Total										126,101			

Item: Crush Stone Base Works			
Spec.: t=5cm	Unit:	100	m2
Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.51			

Unit Price			Yen Conv.
MMK	USD	JPY	
5,900			491

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.39	1.50	0.59	24,300			14,337			0.6×100／D＝0.6×100／155＝0.39 days
LBR-2	Skilled Labour		day	0.71	1.50	1.07	16,200			17,334			1.1×100／D＝1.1×100／155＝0.71 days
LBR-3	Unskilled Labour		day	1.87	1.50	2.81	13,500			37,935			2.9×100／D＝2.9×100／155＝1.87 days
MAT-3008	Crushed stone	C-40	m3	5.00	1.20	6.00	46,500			279,000			Loss Rate = +0.20 (Table 4.1 / P.50)
EOP-6	Backhoe Operation	0.8m3	day	0.65	1.0	0.65	368,008			239,205			1×100／D＝1×100／155＝0.65 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	0.70	1.0	0.70	308,811			2,162			

【Notes】

● Daily Construction Productivity (D) ＝155 m2 (Table 6.1 / P.50)

Productivity (D) for layer thickness up to 20cm. In case the layer thickness is greater than 20cm and less or equal 30cm, the productivity is corrected by 0.7

● Crush Stone＝100×Layer Thickness＝100×0.05＝5.00 m3

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total				589,973			

Item: Crush Stone Base Works

Spec.: t=10cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
8,690			723

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.39	1.50	0.59	24,300			14,337			0.6×100／D＝0.6×100／155＝0.39 days
LBR-2	Skilled Labour		day	0.71	1.50	1.07	16,200			17,334			1.1×100／D＝1.1×100／155＝0.71 days
LBR-3	Unskilled Labour		day	1.87	1.50	2.81	13,500			37,935			2.9×100／D＝2.9×100／155＝1.87 days
MAT-3008	Crushed stone	C-40	m3	10.00	1.20	12.00	46,500			558,000			Loss Rate = +0.20 (Table 4.1 / P.50)
EOP-6	Backhoe Operation	0.8m3	day	0.65	1.0	0.65	368,008			239,205			1×100／D＝1×100／155＝0.65 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	0.70	1.0	0.70	308,811			2,162			

【Notes】

● Daily Construction Productivity (D) ＝155 m2 (Table 6.1 / P.50)

Productivity (D) for layer thickness up to 20cm. In case the layer thickness is greater than 20cm and less or equal 30cm, the productivity is corrected by 0.7

● Crush Stone＝100×Layer Thickness＝100×0.10＝10.00 m3

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total				868,973			

Item: Crush Stone Base Works

Spec.: t=15cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
11,480			955

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.39	1.50	0.59	24,300			14,337			0.6×100／D＝0.6×100／155＝0.39 days
LBR-2	Skilled Labour		day	0.71	1.50	1.07	16,200			17,334			1.1×100／D＝1.1×100／155＝0.71 days
LBR-3	Unskilled Labour		day	1.87	1.50	2.81	13,500			37,935			2.9×100／D＝2.9×100／155＝1.87 days
MAT-3008	Crushed stone	C-40	m3	15.00	1.20	18.00	46,500			837,000			Loss Rate = +0.20 (Table 4.1 / P.50)
EOP-6	Backhoe Operation	0.8m3	day	0.65	1.0	0.65	368,008			239,205			1×100／D＝1×100／155＝0.65 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	0.70	1.0	0.70	308,811			2,162			

【Notes】

● Daily Construction Productivity (D) ＝155 m2 (Table 6.1 / P.50)

Productivity (D) for layer thickness up to 20cm. In case the layer thickness is greater than 20cm and less or equal 30cm, the productivity is corrected by 0.7

● Crush Stone＝100×Layer Thickness＝100×0.15＝15.00 m3

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total				1,147,973			

Item: Crush Stone Base Works

Spec.: t=20cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
14,270			1,187

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.39	1.50	0.59	24,300			14,337			0.6×100／D＝0.6×100／155＝0.39 days
LBR-2	Skilled Labour		day	0.71	1.50	1.07	16,200			17,334			1.1×100／D＝1.1×100／155＝0.71 days
LBR-3	Unskilled Labour		day	1.87	1.50	2.81	13,500			37,935			2.9×100／D＝2.9×100／155＝1.87 days
MAT-3008	Crushed stone	C-40	m3	20.00	1.20	24.00	46,500			1,116,000			Loss Rate = +0.20 (Table 4.1 / P.50)
EOP-6	Backhoe Operation	0.8m3	day	0.65	1.0	0.65	368,008			239,205			1×100／D＝1×100／155＝0.65 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	0.70	1.0	0.70	308,811			2,162			

【Notes】

● Daily Construction Productivity (D) ＝155 m2 (Table 6.1 / P.50)

Productivity (D) for layer thickness up to 20cm. In case the layer thickness is greater than 20cm and less or equal 30cm, the productivity is corrected by 0.7

● Crush Stone＝100×Layer Thickness＝100×0.20＝20.00 m3

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total				1,426,973			

Item: Crush Stone Base Works

Spec.: Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
68,709			5,717

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.18	1.50	0.27	24,300			6,561			0.7×10／D＝0.7×10／38＝0.18 days
LBR-2	Skilled Labour		day	0.34	1.50	0.51	16,200			8,262			1.3×10／D＝1.3×10／38＝0.34 days
LBR-3	Unskilled Labour		day	0.87	1.50	1.31	13,500			17,685			3.3×10／D＝3.3×10／38＝0.87 days
MAT-3008	Crushed stone	C-40	m3	10.00	1.20	12.00	46,500			558,000			Loss Rate = +0.20 (Table 4.1 / P.50)
EOP-6	Backhoe Operation	0.8m3	day	0.26	1.0	0.26	368,008			95,682			1×10／D＝1×10／38＝0.26 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	0.70	1.0	0.70	128,190			897			

【Notes】

- Daily Construction Productivity (D) ＝38 m3 (Table 6.1 / P.50)
- JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total										687,087			

Item: Retaining Wall (Type 2)

Spec.: 24N/mm2 Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.66

Unit Price			Yen Conv.
MMK	USD	JPY	
107,514			8,945

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.15	1.50	0.23	24,300			5,589			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.23	1.50	0.35	16,200			5,670			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.53	1.50	0.80	13,500			10,800			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			UC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	day	0.12	1.0	0.12	855,000			102,600			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	2.00	1.0	2.00	124,659			2,493			
	【Concrete Curing (Simple Type)】 (MLIT Cost Estimate Standard for Civil Works/2013 P.249)												
LBR-3	Unskilled Labour		day	0.30	1.50	0.45	13,500			6,075			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	17.00	1.0	17.00	6,075			1,033			
Total										1,075,137			

Item: Box Culvert (Type 2)

Spec.: 24N/mm2 Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2014 P.121

Unit Price			Yen Conv.
MMK	USD	JPY	
105,463			8,775

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.10	1.50	0.15	24,300			3,645			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.19	1.50	0.29	16,200			4,698			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.58	1.50	0.87	13,500			11,745			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			UC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	day	0.10	1.0	0.10	855,000			85,500			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	105,588			1,056			
	【Concrete Curing (Simple Type)】 (MLIT Cost Estimate Standard for Civil Works/2013 P.249)												
LBR-3	Unskilled Labour		day	0.30	1.50	0.45	13,500			6,075			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	17.00	1.0	17.00	6,075			1,033			
Total										1,054,629			

Item: Geotextile Installation

Spec.: Unit: 100 m2

Source:: 【Adapted】MLIT Cost Estimate Standard for Civil Works/2015 P.58/59

Unit Price			Yen Conv.
MMK	USD	JPY	
41,649			3,465

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Material】												
MAT-7002	Geotextile	Width 60mm	m2	100.00	1.0	100.00	41,466			4,146,600			
	【Installation】												
LBR-1	Foreman		day	0.11	1.50	0.17	24,300			4,131			1×100／D＝1×100／93＝0.11 days
LBR-2	Skilled Labour		day	0.22	1.50	0.33	16,200			5,346			2×100／D＝2×100／93＝0.22 days
LBR-3	Unskilled Labour		day	0.43	1.50	0.65	13,500			8,775			4×100／D＝4×100／93＝0.43 days

【Notes】

- Daily Construction Productivity (D) ＝93 m2 (Table 5.3 / P.57)
- JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total										4,164,852			

Item: Precast Panels Installation Works

Spec.: Mechanically Stabilized Earth Wall (Type 1) Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.51

Unit Price			Yen Conv.
MMK	USD	JPY	
270,816		1,902	24,434

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Panels Installation】												
LBR-1	Foreman		day	1.00	1.0	1.00	24,300			24,300			
LBR-2	Skilled Labour		day	1.00	1.0	1.00	16,200			16,200			
LBR-3	Unskilled Labour		day	2.10	1.0	2.10	13,500			28,350			
EOP-13	Rough Terrain Crane Operation	25t	day	0.50	1/ 75%	0.67	314,820			210,929			General Equipment Corr. = 1/ 75% (P.51)
EOP-7	Backhoe Operation	0.5m3 / Lifting Capacity 2.9t	day	2.00	1/ 75%	2.67	368,334			983,452			General Equipment Corr. = 1/ 75% (P.51)
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	10.00	1.0	10.00	1,263,231			126,323			
	【Material】												
MAT-7038	Precast Panel (Mec. Stab. E. Wall)	14cm	m2	100.00	1.0	100.00	256,920			25,692,000			
MAT-7040	Bolt & Nut	M12×40	no	177.78	1.0	177.78			170			30,223	
MAT-7041	Permeable Anti-Sand Material	4.0×420	m	66.67	1.0	66.67			600			40,002	
MAT-7042	Horizontal Joint Material	60×500×20	m	66.67	1.0	66.67			1,800			120,006	
Total										27,081,554		190,231	

Item: Reinf. Strips Installation Works

Spec.: Mechanically Stabilized Earth Wall (Type 1) Unit: 100 m

Source:: MLIT Cost Estimate Standard for Civil Works/2018 P.52

Unit Price			Yen Conv.
MMK	USD	JPY	
113		1,370	1,379

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.11	1.50	0.17	24,300			4,131			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.11	1.50	0.17	16,200			2,754			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.22	1.50	0.33	13,500			4,455			Simple Labour Corr. = 1.50 (P.39)
MAT-7043	Metallic Strip	Width 60mm	m	100.00	1.0	100.00			1,370			137,000	
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										11,340		137,000	

Item: Fill, Level & Compaction Works

Spec.: Mechanically Stabilized Earth Wall (Type 1) Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2018 P.52

Unit Price			Yen Conv.
MMK	USD	JPY	
4,255			354

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.51	1.0	0.51	24,300			12,393			
LBR-2	Skilled Labour		day	0.40	1.0	0.40	16,200			6,480			
LBR-3	Unskilled Labour		day	0.83	1.0	0.83	13,500			11,205			
EOP-7	Backhoe Operation	0.5m3 / Lifting Capacity 2.9t	day	0.23	1/ 75%	0.31	368,334			114,184			General Equipment Corr. = 1/ 75% (P.51)
EOP-2	Bulldozer Operation	7t (Swamp)	day	0.29	1/ 75%	0.39	571,835			223,016			General Equipment Corr. = 1/ 75% (P.51)
EOP-20	Vibration Roller Operation	Tandem 3～4t	day	0.29	1/ 75%	0.39	117,472			45,814			General Equipment Corr. = 1/ 75% (P.51)
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	3.00	1.0	3.00	413,092			12,393			
Total										425,485			

Item: CDM-Mega Method

Spec.: L_1=3.8m / L=4.4m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
303,620		19,540	44,801

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.09	1.0	0.09	24,300			2,187			1／N×1=1／11.59×1=0.09 days
LBR-2	Skilled Labour		day	0.17	1.0	0.17	16,200			2,754			1／N×2=1／11.59×2=0.17 days
LBR-3	Unskilled Labour		day	0.09	1.0	0.09	13,500			1,215			1／N×1=1／11.59×1=0.09 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	2.478	1.1	2.726	106,053			289,100			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	0.48	1/ 75%	0.64	8,280		19,600	5,299		12,544	5.6／N=5.6／11.59=0.48 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	0.48	1/ 75%	0.64	108		4,631	69		2,964	5.6／N=5.6／11.59=0.48 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	11,524		15,508	2,996		4,032	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =11.59 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=4.40 m

● Soil Stabilizer=v×L_1=0.652×3.80=2.478 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.300=0.652 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.300 t/m3

Pile Length (L_1)=3.80 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total	303,620		19,540	

Item: CDM-Mega Method

Spec.: L_i=4.0m / L=4.6m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
318,786		19,540	46,063

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.09	1.0	0.09	24,300			2,187			1／N×1=1／11.59×1=0.09 days
LBR-2	Skilled Labour		day	0.17	1.0	0.17	16,200			2,754			1／N×2=1／11.59×2=0.17 days
LBR-3	Unskilled Labour		day	0.09	1.0	0.09	13,500			1,215			1／N×1=1／11.59×1=0.09 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	2.608	1.1	2.869	106,053			304,266			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	0.48	1/ 75%	0.64	8,280		19,600	5,299		12,544	5.6／N=5.6／11.59=0.48 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	0.48	1/ 75%	0.64	108		4,631	69		2,964	5.6／N=5.6／11.59=0.48 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	11,524		15,508	2,996		4,032	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =11.59 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=4.60 m

● Soil Stabilizer=v×L_i=0.652×4.00=2.608 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.300=0.652 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.300 t/m3

Pile Length (L_i)=4.00 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total	318,786		19,540	

Item: CDM-Mega Method

Spec.: L_1=11.3m / L=12.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
884,770		34,500	108,113

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.15	1.0	0.15	24,300			3,645			1／N×1=1／6.59×1=0.15 days
LBR-2	Skilled Labour		day	0.30	1.0	0.30	16,200			4,860			1／N×2=1／6.59×2=0.30 days
LBR-3	Unskilled Labour		day	0.15	1.0	0.15	13,500			2,025			1／N×1=1／6.59×1=0.15 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	7.368	1.1	8.105	106,053			859,560			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	0.85	1/ 75%	1.13	8,280		19,600	9,356		22,148	5.6／N=5.6／6.59=0.85 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	0.85	1/ 75%	1.13	108		4,631	122		5,233	5.6／N=5.6／6.59=0.85 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	20,008		27,381	5,202		7,119	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =6.59 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=12.00 m

● Soil Stabilizer=v×L_1=0.652×11.30=7.368 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.300=0.652 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.300 t/m3

Pile Length (L_1)=11.30 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total								884,770		34,500	

Item: CDM-Mega Method

Spec.: L_1=11.8m / L=12.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
922,737		34,500	111,272

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.15	1.0	0.15	24,300			3,645			1／N×1=1／6.59×1=0.15 days
LBR-2	Skilled Labour		day	0.30	1.0	0.30	16,200			4,860			1／N×2=1／6.59×2=0.30 days
LBR-3	Unskilled Labour		day	0.15	1.0	0.15	13,500			2,025			1／N×1=1／6.59×1=0.15 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	7.694	1.1	8.463	106,053			897,527			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	0.85	1/ 75%	1.13	8,280		19,600	9,356		22,148	5.6／N=5.6／6.59=0.85 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	0.85	1/ 75%	1.13	108		4,631	122		5,233	5.6／N=5.6／6.59=0.85 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	20,008		27,381	5,202		7,119	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =6.59 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=12.50 m

● Soil Stabilizer=v×L_1=0.652×11.80=7.694 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.300=0.652 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.300 t/m3

Pile Length (L_1)=11.80 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total	922,737		34,500	

Item: CDM-Mega Method			
Spec.: L_1=15.5m / L=17.5m	Unit:	1	no
Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65			

Unit Price			Yen Conv.
MMK	USD	JPY	
1,328,416		43,659	154,183

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.19	1.0	0.19	24,300			4,617			1／N×1=1／5.25×1=0.19 days
LBR-2	Skilled Labour		day	0.38	1.0	0.38	16,200			6,156			1／N×2=1／5.25×2=0.38 days
LBR-3	Unskilled Labour		day	0.19	1.0	0.19	13,500			2,565			1／N×1=1／5.25×1=0.19 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	11.114	1.1	12.225	106,053			1,296,498			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	1.07	1/ 75%	1.43	8,280		19,600	11,840		28,028	5.6／N=5.6／5.25=1.07 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	1.07	1/ 75%	1.43	108		4,631	154		6,622	5.6／N=5.6／5.25=1.07 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	25,332		34,650	6,586		9,009	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =5.25 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=17.50 m

● Soil Stabilizer=v×L_1=0.717×15.50=11.114 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.330=0.717 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.330 t/m3

Pile Length (L_1)=15.50 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total	1,328,416		43,659	

Item: CDM-Mega Method

Spec.: L_1=17.5m / L=17.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
1,495,768		43,659	168,107

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.19	1.0	0.19	24,300			4,617			1／N×1=1／5.25×1=0.19 days
LBR-2	Skilled Labour		day	0.38	1.0	0.38	16,200			6,156			1／N×2=1／5.25×2=0.38 days
LBR-3	Unskilled Labour		day	0.19	1.0	0.19	13,500			2,565			1／N×1=1／5.25×1=0.19 days
MAT-3005	Soil Stabilizer	Ordinary Portland (OPC)	t	12.548	1.1	13.803	106,053			1,463,850			Loss Rate = +0.10 (Table 5.5 / P.63)
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	1.07	1/ 75%	1.43	8,280		19,600	11,840		28,028	5.6／N=5.6／5.25=1.07 days
EOP-15	Cement Slurry Plant Operation	20m3/h	h	1.07	1/ 75%	1.43	108		4,631	154		6,622	5.6／N=5.6／5.25=1.07 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	26.00	1.0	26.00	25,332		34,650	6,586		9,009	

【Notes】

○ Productivity Rates According to CDM Research Association Cost Estimation Manual/2012 P.44

● Daily Construction Productivity (N) =5.25 piles (Table 3.7 / P.47)

Condition ① Construction Method: Biaxial, Diameter = 1,200 mm

Condition ② Pile Length (L)=17.50 m

● Soil Stabilizer=v×L_1=0.717×17.50=12.548 t

Stabilizer Material Quantity per m (v)=Pile Cross Section×Soil Stabilizer Rate=2.172×0.000=0.717 t/m

Pile Cross Section=2.172 m2

Soil Stabilizer Rate=0.000 t/m3

Pile Length (L_1)=17.50 m

● JICA Correction Coefficient: General Equipment Corr. = 1/ 75% (P.51)

Total									1,495,768		43,659	

Item: Slurry Plant In Situ Displacement Works

Spec.:

Unit: 1 times

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.65

Unit Price			Yen Conv.
MMK	USD	JPY	
547,283			45,534

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.00	1.0	1.00	24,300			24,300			
LBR-2	Skilled Labour		day	2.90	1.0	2.90	16,200			46,980			
LBR-3	Unskilled Labour		day	1.40	1.0	1.40	13,500			18,900			
ERN-20	Rough Terrain Crane	25t	day	1.40	1/ 75%	1.87	244,440			457,103			General Equipment Corr. = 1/ 75% (P.51)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										547,283			

Item: Reverse Circulation Drilling Works

Spec.: AF.1／Φ1500mm／L=40.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
13,138,137		621,757	1,714,850

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.88	1/ 75%	3.84	24,300			93,312			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-2	Skilled Labour		day	2.88	1/ 75%	3.84	16,200			62,208			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-4	Scaffolder		day	5.76	1/ 75%	7.68	20,300			155,904			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
LBR-3	Unskilled Labour		day	5.76	1/ 75%	7.68	13,500			103,680			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	4.35	1/ 75%	5.80							$1.51 \times \gamma \times d_1 = \ldots = 4.35$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	3.48	1/ 75%	4.64			19,601			90,949	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 3.48$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.85	1/ 75%	3.80	388,098			1,474,772			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.85$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.51	1/ 75%	3.35	286,854			960,961			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.51$ days
MAT-3003	Concrete	30 N/mm2	m3	71.57	1.12	80.16	97,810			7,840,450			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	4.219	1.0	4.219	237,219		60,480	1,000,827		255,165	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.108	1.0	0.108			88,000			9,504	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,850,837		90,949	883,759		28,194	

【Notes】

- Construction Method: B-method
- Excavation Length＝41.3 m
- Excavation Length: $40 < L_1 \leqq 50$ m ⇒ Construction Days: $d_1 = 1.96$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										13,138,137		621,757	

Item: Reverse Circulation Drilling Works

Spec.: PF.1／Φ1500mm／L=41.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
13,357,420		628,289	1,739,626

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.88	1/ 75%	3.84	24,300			93,312			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-2	Skilled Labour		day	2.88	1/ 75%	3.84	16,200			62,208			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-4	Scaffolder		day	5.76	1/ 75%	7.68	20,300			155,904			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
LBR-3	Unskilled Labour		day	5.76	1/ 75%	7.68	13,500			103,680			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	4.35	1/ 75%	5.80							$1.51 \times \gamma \times d_1 = \ldots = 4.35$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	3.48	1/ 75%	4.64			19,601			90,949	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 3.48$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.85	1/ 75%	3.80	388,098			1,474,772			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.85$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.51	1/ 75%	3.35	286,854			960,961			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.51$ days
MAT-3003	Concrete	30 N/mm2	m3	73.34	1.12	82.14	97,810			8,034,113			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	4.327	1.0	4.327	237,219		60,480	1,026,447		261,697	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.108	1.0	0.108			88,000			9,504	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,850,837		90,949	883,759		28,194	

【Notes】

- Construction Method: B-method
- Excavation Length＝43.0 m
- Excavation Length: $40 < L_1 \leqq 50$ m ⇒ Construction Days: $d_1 = 1.96$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			13,357,420		628,289	

Item: Reverse Circulation Drilling Works

Spec.: PF.2／Φ1500mm／L=41.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
13,357,420		628,289	1,739,626

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.88	1/ 75%	3.84	24,300			93,312			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-2	Skilled Labour		day	2.88	1/ 75%	3.84	16,200			62,208			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-4	Scaffolder		day	5.76	1/ 75%	7.68	20,300			155,904			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
LBR-3	Unskilled Labour		day	5.76	1/ 75%	7.68	13,500			103,680			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	4.35	1/ 75%	5.80							$1.51 \times \gamma \times d_1 = \ldots = 4.35$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	3.48	1/ 75%	4.64			19,601			90,949	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 3.48$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.85	1/ 75%	3.80	388,098			1,474,772			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.85$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.51	1/ 75%	3.35	286,854			960,961			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.51$ days
MAT-3003	Concrete	30 N/mm2	m3	73.34	1.12	82.14	97,810			8,034,113			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	4.327	1.0	4.327	237,219		60,480	1,026,447		261,697	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.108	1.0	0.108			88,000			9,504	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,850,837		90,949	883,759		28,194	

【Notes】

- Construction Method: B-method
- Excavation Length＝43.2 m
- Excavation Length: $40 < L_1 \leqq 50$ m ⇒ Construction Days: $d_1 = 1.96$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			13,357,420		628,289	

Item: Reverse Circulation Drilling Works

Spec.: PF.3／Φ1500mm／L=38.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
12,352,018		520,709	1,548,397

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.88	1/ 75%	3.84	24,300			93,312			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-2	Skilled Labour		day	2.88	1/ 75%	3.84	16,200			62,208			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-4	Scaffolder		day	5.76	1/ 75%	7.68	20,300			155,904			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
LBR-3	Unskilled Labour		day	5.76	1/ 75%	7.68	13,500			103,680			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	4.35	1/ 75%	5.80							$1.51 \times \gamma \times d_1 = \ldots = 4.35$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	3.48	1/ 75%	4.64			19,601			90,949	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 3.48$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.85	1/ 75%	3.80	388,098			1,474,772			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.85$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.51	1/ 75%	3.35	286,854			960,961			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.51$ days
MAT-3003	Concrete	30 N/mm2	m3	67.15	1.12	75.21	97,810			7,356,290			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.520	1.0	3.520	237,219		60,480	835,011		212,890	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.097	1.0	0.097			88,000			8,536	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,850,837		90,949	883,759		28,194	

【Notes】

- Construction Method: B-method
- Excavation Length＝40.8 m
- Excavation Length: $40 < L_1 \leqq 50$ m ⇒ Construction Days: $d_1 = 1.96$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			12,352,018		520,709	

Item: Reverse Circulation Drilling Works

Spec.: PF.4／Φ1500mm／L=40.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
12,898,329		537,522	1,610,663

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.88	1/ 75%	3.84	24,300			93,312			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-2	Skilled Labour		day	2.88	1/ 75%	3.84	16,200			62,208			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 1 = 2.88$ days
LBR-4	Scaffolder		day	5.76	1/ 75%	7.68	20,300			155,904			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
LBR-3	Unskilled Labour		day	5.76	1/ 75%	7.68	13,500			103,680			$\gamma \times d_1 \times n = 1.47 \times 1.96 \times 2 = 5.76$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	4.35	1/ 75%	5.80							$1.51 \times \gamma \times d_1 = \ldots = 4.35$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	3.48	1/ 75%	4.64			19,601			90,949	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 3.48$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.85	1/ 75%	3.80	388,098			1,474,772			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.85$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.51	1/ 75%	3.35	286,854			960,961			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.51$ days
MAT-3003	Concrete	30 N/mm2	m3	71.57	1.12	80.16	97,810			7,840,450			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.782	1.0	3.782	237,219		60,480	897,162		228,735	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.108	1.0	0.108			88,000			9,504	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,850,837		90,949	883,759		28,194	

【Notes】

- Construction Method: B-method
- Excavation Length＝43.3 m
- Excavation Length: $40 < L_1 \leqq 50$ m ⇒ Construction Days: $d_1 = 1.96$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										12,898,329		537,522	

Item: Reverse Circulation Drilling Works

Spec.: PF.5／Φ1500mm／L=35.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
11,338,928		557,487	1,500,886

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	62.73	1.12	70.26	97,810			6,872,131			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.532	1.0	3.532	237,219		60,480	837,858		213,615	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.092	1.0	0.092			88,000			8,096	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝38.4 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			11,338,928		557,487	

Item: Reverse Circulation Drilling Works

Spec.: PF.6／Φ1500mm／L=33.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,897,039		543,049	1,449,683

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	59.20	1.12	66.30	97,810			6,484,803			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.302	1.0	3.302	237,219		60,480	783,297		199,705	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝36.3 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,897,039		543,049	

Item: Reverse Circulation Drilling Works

Spec.: PF.7／Φ1500mm／L=37.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
11,486,173		461,934	1,417,584

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	65.38	1.12	73.23	97,810			7,162,626			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	4.406	1.0	4.406	237,219		60,480	1,045,187		266,475	
ITEM-82	Rebar Works	Φ29～Φ32	t	1.433	1.0	1.433	144,987		61,560	207,766		88,215	
MAT-1009	Steel Sheet	6×50	t	0.097	1.0	0.097			88,000			8,536	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝39.9 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			11,486,173		461,934	

Item: Reverse Circulation Drilling Works

Spec.: PF.8／Φ1500mm／L=37.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
11,672,834		568,995	1,540,175

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	65.38	1.12	73.23	97,810			7,162,626			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.715	1.0	3.715	237,219		60,480	881,269		224,683	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.097	1.0	0.097			88,000			8,536	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝39.9 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			11,672,834		568,995	

Item: Reverse Circulation Drilling Works

Spec.: PF.9／Φ1500mm／L=35.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
11,233,270		510,332	1,444,940

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	62.73	1.12	70.26	97,810			6,872,131			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.589	1.0	3.589	237,219		60,480	851,379		217,063	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.029	1.0	3.029	144,987		61,560	439,166		186,465	
MAT-1009	Steel Sheet	6×50	t	0.092	1.0	0.092			88,000			8,096	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝38.4 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			11,233,270		510,332	

Item: Reverse Circulation Drilling Works

Spec.: PF.10／Φ1500mm／L=32.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,674,909		535,791	1,423,943

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	57.43	1.12	64.32	97,810			6,291,139			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.182	1.0	3.182	237,219		60,480	754,831		192,447	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.851	1.0	3.851	144,987		61,560	558,345		237,068	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝35.3 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,674,909		535,791	

Item: Reverse Circulation Drilling Works

Spec.: PF.11／Φ1500mm／L=32.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,470,210		460,508	1,331,629

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	57.43	1.12	64.32	97,810			6,291,139			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	2.893	1.0	2.893	237,219		60,480	686,275		174,969	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝35.4 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,470,210		460,508	

Item: Reverse Circulation Drilling Works

Spec.: PF.12／Φ1500mm／L=33.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,580,355		463,653	1,343,939

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	58.32	1.12	65.32	97,810			6,388,949			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	2.945	1.0	2.945	237,219		60,480	698,610		178,114	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝35.8 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										10,580,355		463,653	

Item: Reverse Circulation Drilling Works

Spec.: PF.13／Φ1500mm／L=32.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,470,210		460,508	1,331,629

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	57.43	1.12	64.32	97,810			6,291,139			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	2.893	1.0	2.893	237,219		60,480	686,275		174,969	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝35.4 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,470,210		460,508	

Item: Reverse Circulation Drilling Works

Spec.: PF.14／Φ1500mm／L=33.5m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,866,587		524,365	1,428,465

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	59.20	1.12	66.30	97,810			6,484,803			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.445	1.0	3.445	237,219		60,480	817,219		208,354	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.407	1.0	3.407	144,987		61,560	493,971		209,735	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝36.3 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,866,587		524,365	

Item: Reverse Circulation Drilling Works

Spec.: PF.15／Φ1500mm／L=34.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,794,865		469,217	1,367,350

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	60.08	1.12	67.29	97,810			6,581,635			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.037	1.0	3.037	237,219		60,480	720,434		183,678	
ITEM-82	Rebar Works	Φ29～Φ32	t	2.912	1.0	2.912	144,987		61,560	422,202		179,263	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝36.8 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,794,865		469,217	

Item: Reverse Circulation Drilling Works

Spec.: AF.2／Φ1500mm／L=34.0m　　Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.141

Unit Price			Yen Conv.
MMK	USD	JPY	
10,884,893		495,047	1,400,670

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.37	1/ 75%	3.16	24,300			76,788			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-2	Skilled Labour		day	2.37	1/ 75%	3.16	16,200			51,192			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 1 = 2.37$ days
LBR-4	Scaffolder		day	4.73	1/ 75%	6.31	20,300			128,093			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
LBR-3	Unskilled Labour		day	4.73	1/ 75%	6.31	13,500			85,185			$\gamma \times d_1 \times n = 1.47 \times 1.61 \times 2 = 4.73$ days
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day	3.57	1/ 75%	4.76							$1.51 \times \gamma \times d_1 = \ldots = 3.57$ days
ERN-22	Reverse Circulation Drill	Φ3200mm	day	2.86	1/ 75%	3.81			19,601			74,680	$1.51 \times \gamma \times \delta \times d_1 = \ldots = 2.86$ days
EOP-12	Crawler Crane Operation	40～45t	day	2.34	1/ 75%	3.12	388,098			1,210,866			$\gamma \times \varepsilon_1 \times d_1 = \ldots = 2.34$ days
EOP-12	Crawler Crane Operation	40～45t	day	0.00	1/ 75%	0.00	388,098						$\gamma \times \varepsilon_2 \times d_1 = 0.00$ days
EOP-5	Backhoe Operation	0.5m3	day	2.06	1/ 75%	2.75	286,854			788,849			$1.09 \times \gamma \times \delta \times d_1 = \ldots = 2.06$ days
MAT-3003	Concrete	30 N/mm2	m3	60.08	1.12	67.29	97,810			6,581,635			Loss Rate = +0.12 （表5.1 / P.140）
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.014	1.0	0.014	279,905		62,640	3,919		877	
ITEM-81	Rebar Works	Φ16～Φ25	t	3.345	1.0	3.345	237,219		60,480	793,498		202,306	
ITEM-82	Rebar Works	Φ29～Φ32	t	3.029	1.0	3.029	144,987		61,560	439,166		186,465	
MAT-1009	Steel Sheet	6×50	t	0.086	1.0	0.086			88,000			7,568	
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	31.00	1.0	31.00	2,340,973		74,680	725,702		23,151	

【Notes】

- Construction Method: B-method
- Excavation Length＝36.9 m
- Excavation Length: $30 < L_1 \leqq 40$ m ⇒ Construction Days: $d_1 = 1.61$ (Table 4.1 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Construction Coefficient: $\gamma = 1.47$ (Table 4.2 / P.138)
- Pile Diameter More Than 1,400mm ⇒ Excavation Coefficient: $\delta = 0.8$ (Table 4.3 / P.139)
- Crane Type Coefficient: $\varepsilon_1 = 0.99$、 $\varepsilon_2 = 0.0$ (Table 4.4 / P.139)
- Correct equipment productivity. Use the same factor to correct labour productivity (P.4/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total			10,884,893		495,047	

Item: Test Cost

Spec.: Static Loading Test　　Unit: 1 place

Source:: JICA Study Team

Unit Price			Yen Conv.
MMK	USD	JPY	
62,781,830		1,044,580	6,268,028

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Anchor Pile】												
ITEM-63	Anchor Pile	Φ1500mm／L=41.5m	no	1.00	1.0	1.00	13,357,420		628,289	13,357,420		628,289	Test Place: AP.1 Region
ITEM-25	Foundation Works Equip.	Japanese Procurement	no	1.00	1.0	1.00			416,291			416,291	Test Place: AP.1 Region
	【Test Cost】												
QTN-16	Test Cost	Static Loading Test	times	1.00	1.0	1.00	49,424,410			49,424,410			
Total										62,781,830		1,044,580	

Item: Rebar Works

Spec.: Less or equal to Φ13 Unit: 1 t

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.257

Unit Price			Yen Conv.
MMK	USD	JPY	
279,905		62,640	85,928

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Rebar Assembly】												
LBR-1	Foreman		day	0.20	2.50	0.50	24,300			12,150			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	1.10	2.50	2.75	20,300			55,825			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.70	2.50	1.75	13,500			23,625			Skilled Labour Corr. = 2.50 (P.39)
MAT-1001	Deformed Reinforcing Bar	D10～D13 (SD345)	t	1.000	1.08	1.080			58,000			62,640	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	91,600			1,832			
	【Rebar Install】												
LBR-1	Foreman		day	0.40	2.50	1.00	24,300			24,300			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	1.80	2.50	4.50	20,300			91,350			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.50	2.50	3.75	13,500			50,625			Skilled Labour Corr. = 2.50 (P.39)
ERN-18	Truck Crane	16t	day	0.08	1.0	0.08	190,120			15,210			
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	166,275			4,988			

【Notes】

● Rebar installation height more or equal 5m

Total										279,905		62,640	

Item: Rebar Works

Spec.: Φ16～Φ25 Unit: 1 t

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.257

Unit Price			Yen Conv.
MMK	USD	JPY	
237,219		60,480	80,217

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Rebar Assembly】												
LBR-1	Foreman		day	0.20	2.50	0.50	24,300			12,150			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	0.90	2.50	2.25	20,300			45,675			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.60	2.50	1.50	13,500			20,250			Skilled Labour Corr. = 2.50 (P.39)
MAT-1002	Deformed Reinforcing Bar	D16～D25 (SD345)	t	1.000	1.08	1.080			56,000			60,480	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	78,075			1,562			
	【Rebar Install】												
LBR-1	Foreman		day	0.30	2.50	0.75	24,300			18,225			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	1.50	2.50	3.75	20,300			76,125			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.30	2.50	3.25	13,500			43,875			Skilled Labour Corr. = 2.50 (P.39)
ERN-18	Truck Crane	16t	day	0.08	1.0	0.08	190,120			15,210			
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	138,225			4,147			

【Notes】

● Rebar installation height more or equal 5m

Total										237,219		60,480	

Item: Rebar Works

Spec.: Φ29～Φ32 Unit: 1 t

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.257

Unit Price			Yen Conv.
MMK	USD	JPY	
144,987		61,560	73,623

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Rebar Assembly】												
LBR-1	Foreman		day	0.10	2.50	0.25	24,300			6,075			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	0.50	2.50	1.25	20,300			25,375			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.30	2.50	0.75	13,500			10,125			Skilled Labour Corr. = 2.50 (P.39)
MAT-1003	Deformed Reinforcing Bar	D29～D32 (SD345)	t	1.000	1.08	1.080			57,000			61,560	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	41,575			832			
	【Rebar Install】												
LBR-1	Foreman		day	0.20	2.50	0.50	24,300			12,150			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	0.90	2.50	2.25	20,300			45,675			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.80	2.50	2.00	13,500			27,000			Skilled Labour Corr. = 2.50 (P.39)
ERN-18	Truck Crane	16t	day	0.08	1.0	0.08	190,120			15,210			
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	84,825			2,545			

【Notes】

● Rebar installation height more or equal 5m

Total										144,987		61,560	

Item: Mortar Mix

Spec.: 1:3 Unit: 1 m3

Source:: MLIT Cost Estimate General Standard for Civil Works/2013 P.Ⅱ-4-①-6

Unit Price			Yen Conv.
MMK	USD	JPY	
81,822			6,808

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
MAT-3005	Cement	Ordinary Portland (OPC)	t	0.53	1.00	0.53	106,053			56,208			Loss included in quantity
MAT-3007	Sand		m3	1.05	1.00	1.05	3,180			3,339			Loss included in quantity
LBR-3	Unskilled Labour		day	1.10	1.50	1.65	13,500			22,275			Simple Labour Corr. = 1.50 (P.39)
SUN-S	Sundry Expenses		L.Sum	1.00	1.00	1.00							
Total										81,822			

Item: Levelling Concrete

Spec.: 18N/mm2 / Conc. Pump Cast　　Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.248

Unit Price			Yen Conv.
MMK	USD	JPY	
104,911			8,729

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.14	1.50	0.21	24,300			5,103			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.40	1.50	0.60	16,200			9,720			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.54	1.50	0.81	13,500			10,935			Simple Labour Corr. = 1.50 (P.39)
MAT-3001	Concrete	18 N/mm2	m3	10.00	1.06	10.60	84,286			893,432			UC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.03	1.0	1.03	124,636			128,375			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	154,133			1,541			

【Notes】

● Concrete pump casting for unreinforced/reinforced concrete structures

Condition ① Casting volume: More or equal 10 m3 and less than 300 m3

Total										1,049,106			

Item: Struc. Concrete (General Struc.)

Spec.: 18N/mm2 / Conc. Pump Cast　　Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.248/249

Unit Price			Yen Conv.
MMK	USD	JPY	
105,621			8,788

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.14	1.50	0.21	24,300			5,103			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.40	1.50	0.60	16,200			9,720			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.54	1.50	0.81	13,500			10,935			Simple Labour Corr. = 1.50 (P.39)
MAT-3001	Concrete	18 N/mm2	m3	10.00	1.06	10.60	84,286			893,432			UC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.03	1.0	1.03	124,636			128,375			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	154,133			1,541			
	【Concrete Curing (Simple Type)】												
LBR-3	Unskilled Labour		day	0.30	1.50	0.45	13,500			6,075			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	17.00	1.0	17.00	6,075			1,033			

【Notes】

● Concrete pump casting for unreinforced/reinforced concrete structures

Condition ① Casting volume: More or equal 10 m3 and less than 300 m3

Total										1,056,214			

Item: Struc. Concrete (General Struc.)

Spec.: 24N/mm2 / Conc. Pump Cast　　Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.248/249

Unit Price			Yen Conv.
MMK	USD	JPY	
110,086			9,159

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.14	1.50	0.21	24,300			5,103			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.40	1.50	0.60	16,200			9,720			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.54	1.50	0.81	13,500			10,935			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			RC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.03	1.0	1.03	124,636			128,375			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	154,133			1,541			
	【Concrete Curing (Simple Type)】												
LBR-3	Unskilled Labour		day	0.16	1.50	0.24	13,500			3,240			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	33.00	1.0	33.00	3,240			1,069			

【Notes】

● Concrete pump casting for unreinforced/reinforced concrete structures

Condition ① Casting volume: More or equal 10 m3 and less than 300 m3

Total										1,100,860			

Item: Struc. Concrete

Spec.: 24N/mm2 (Bridge Slab) Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.248/249

Unit Price			Yen Conv.
MMK	USD	JPY	
113,737			9,463

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.14	1.50	0.21	24,300			5,103			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.40	1.50	0.60	16,200			9,720			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.54	1.50	0.81	13,500			10,935			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			RC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.32	1.0	1.32	124,636			164,520			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	190,278			1,903			
	【Concrete Curing (Simple Type)】												
LBR-3	Unskilled Labour		day	0.16	1.50	0.24	13,500			3,240			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	33.00	1.0	33.00	3,240			1,069			

【Notes】

● Concrete pump casting for unreinforced/reinforced concrete structures

Condition ① Casting volume: More or equal 10 m3 and less than 300 m3

Total										1,137,367			

Item: Struc. Concrete

Spec.: 30N/mm2 (Bridge Slab) Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.248/249

Unit Price			Yen Conv.
MMK	USD	JPY	
123,328			10,261

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.14	1.50	0.21	24,300			5,103			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.40	1.50	0.60	16,200			9,720			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.54	1.50	0.81	13,500			10,935			Simple Labour Corr. = 1.50 (P.39)
MAT-3003	Concrete	30 N/mm2	m3	10.00	1.06	10.60	97,810			1,036,786			RC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.32	1.0	1.32	124,636			164,520			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	1.00	1.0	1.00	190,278			1,903			
	【Concrete Curing (Simple Type)】												
LBR-3	Unskilled Labour		day	0.16	1.50	0.24	13,500			3,240			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	33.00	1.0	33.00	3,240			1,069			

【Notes】

● Concrete pump casting for unreinforced/reinforced concrete structures

Condition ① Casting volume: More or equal 10 m3 and less than 300 m3

Total										1,233,276			

Item: Struc. Concrete (Small Struc.)

Spec.: 18N/mm2 / Manual Cast　　Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.249

Unit Price			Yen Conv.
MMK	USD	JPY	
102,591			8,536

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.91	1.50	1.37	24,300			33,291			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	1.00	1.50	1.50	16,200			24,300			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	2.65	1.50	3.98	13,500			53,730			Simple Labour Corr. = 1.50 (P.39)
MAT-3001	Concrete	18 N/mm2	m3	10.00	1.06	10.60	84,286			893,432			Loss Rate = +0.06 (Table 3.1 / P.244)
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	111,321			4,453			
	【Concrete Curing (Simple Type)】												
LBR-3	Unskilled Labour		day	0.69	1.50	1.04	13,500			14,040			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	19.00	1.0	19.00	14,040			2,668			
Total										1,025,914			

Item: Struc. Concrete (Small Struc.)

Spec.: 24N/mm2 / Manual Cast　　Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.249

Unit Price			Yen Conv.
MMK	USD	JPY	
107,336			8,930

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Concrete Casting】												
LBR-1	Foreman		day	0.91	1.50	1.37	24,300			33,291			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	1.00	1.50	1.50	16,200			24,300			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	2.65	1.50	3.98	13,500			53,730			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			Loss Rate = +0.06 (Table 3.1 / P.244)
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	111,321			4,453			
	【Curing】												
LBR-3	Unskilled Labour		day	0.69	1.50	1.04	13,500			14,040			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	19.00	1.0	19.00	14,040			2,668			
Total										1,073,359			

Item: Formworks

Spec.: General Type　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.252

Unit Price			Yen Conv.
MMK	USD	JPY	
16,268			1,353

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	3.10	2.50	7.75	24,300			188,325			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	15.70	2.50	39.25	20,300			796,775			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	10.00	2.50	25.00	13,500			337,500			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	23.00	1.0	23.00	1,322,600			304,198			
Total										1,626,798			

Item: Formworks

Spec.: Small Structures　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.252

Unit Price			Yen Conv.
MMK	USD	JPY	
14,632			1,217

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	3.50	2.50	8.75	24,300			212,625			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	13.50	2.50	33.75	20,300			685,125			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	11.10	2.50	27.75	13,500			374,625			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	15.00	1.0	15.00	1,272,375			190,856			
Total										1,463,231			

Item: Formworks

Spec.: Cylindrical Type　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.252

Unit Price			Yen Conv.
MMK	USD	JPY	
21,698			1,805

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	4.40	2.50	11.00	24,300			267,300			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	20.60	2.50	51.50	20,300			1,045,450			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	17.50	2.50	43.75	13,500			590,625			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	14.00	1.0	14.00	1,903,375			266,473			
Total										2,169,848			

Item: Formworks

Spec.: For Levelling Concrete　　Unit: 10 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.252

Unit Price			Yen Conv.
MMK	USD	JPY	
8,298			690

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.10	2.50	0.25	24,300			6,075			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	1.00	2.50	2.50	20,300			50,750			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.40	2.50	1.00	13,500			13,500			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	18.00	1.0	18.00	70,325			12,659			
Total										82,984			

Item: Formworks

Spec.: Metallic Type　　Unit: 4 no

Source:: Quotation

Unit Price			Yen Conv.
MMK	USD	JPY	
64,591,252			5,373,992

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
STD-4	Metallic Formwork	Depreciation	m2 × days	54,692.00	1.0	54,692.00	4,724			258,365,008			
Total										258,365,008			

Item: H Pile Driving /Removal Works

Spec.: Vibrohammer 60kW / H-300 Unit: 10 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.228

Unit Price			Yen Conv.
MMK	USD	JPY	
76,898			6,398

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Pile Drive (No Welding)】												
LBR-1	Foreman		day	0.43	1/ 75%	0.57	24,300			13,851			10／N×1＝10／23×1＝0.43 days
LBR-4	Scaffolder		day	0.87	1/ 75%	1.16	20,300			23,548			10／N×2＝10／23×2＝0.87 days
LBR-3	Unskilled Labour		day	0.43	1/ 75%	0.57	13,500			7,695			10／N×1＝10／23×1＝0.43 days
LBR-10	Welder		day	0.00	1/ 75%	0.00	21,600						10／N×0＝10／23×0＝0.00 days
EOP-26	Vibro Hammer Operation	60W	day	0.43	1/ 75%	0.57	677,700			386,289			10／N＝10／23＝0.43 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	22.00	1.0	22.00	431,383			94,904			
	【Pile Extraction】												
LBR-1	Foreman		day	0.20	1/ 75%	0.27	24,300			6,561			10／N×1＝10／50×1＝0.20 days
LBR-4	Scaffolder		day	0.40	1/ 75%	0.53	20,300			10,759			10／N×2＝10／50×2＝0.40 days
LBR-3	Unskilled Labour		day	0.20	1/ 75%	0.27	13,500			3,645			10／N×1＝10／50×1＝0.20 days
LBR-10	Welder		day	0.00	1/ 75%	0.00	21,600						10／N×0＝10／50×0＝0.00 days
EOP-26	Vibro Hammer Operation	60W	day	0.20	1/ 75%	0.27	677,700			182,979			10／N＝10／50＝0.20 days
SUN-13	Sundry Expenses	On labour and equipment rent/opera	%	19.00	1.0	19.00	203,944			38,749			

【Notes】

【Pile Drive (No Welding)】

● N=23 piles/day (Table 3.8 / P.214)

Condition ① Model＝H300

Condition ② Driving length＝12m or less

【Pile Extraction】

● N=50 piles/day (Table 3.33 / P.226)

Condition ① Land

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.5/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										768,980			

Item: Lagging Works

Spec.: Install & Removal　　Unit: 10 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.270/271

Unit Price			Yen Conv.
MMK	USD	JPY	
5,832			485

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Install】												
LBR-1	Foreman		day	0.40	1.50	0.60	24,300			14,580			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	1.20	1.50	1.80	13,500			24,300			Simple Labour Corr. = 1.50 (P.39)
	Lagging Plate		m2	10.00	1.0	10.00							Calculated Separately
	【Removal】												
LBR-1	Foreman		day	0.20	1.50	0.30	24,300			7,290			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.60	1.50	0.90	13,500			12,150			Simple Labour Corr. = 1.50 (P.39)
Total										58,320			

Item: Temp. Constr. Material

Spec.: Temp. Ret. Wall (Substructure) Unit: 9 place

Source:: JICA Study Team

Unit Price			Yen Conv.
MMK	USD	JPY	
4,867,438			404,971

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Total Loss】												
MAT-6005	H Pile	For Temp. Retaining Wall	t	64.728	1.00	64.728	814,800			52,740,374			H-300×300×10×15 (93 kg/m)
MAT-6006	Lagging Plate		m2	259.80	1.00	259.80	15,024			3,903,235			
	【Steel Scrap】												
MAT-1010	Steel Scrap	Heavy H4 Class	t	64.728	1.00	64.728	-198,317			-12,836,663			
Total										43,806,946			

Item: Temp. Constr. Material

Spec.: Temp. Ret. Wall (Drainage) Unit: 4 place

Source:: JICA Study Team

Unit Price			Yen Conv.
MMK	USD	JPY	
6,334,252			527,010

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Total Loss】												
MAT-6005	H Pile	For Temp. Retaining Wall	t	37.20	1.00	37.20	814,800			30,310,560			H-300×300×10×15 (93 kg/m)
MAT-6006	Lagging Plate		m2	160.00	1.00	160.00	15,024			2,403,840			
	【Steel Scrap】												
MAT-1010	Steel Scrap	Heavy H4 Class	t	37.20	1.00	37.20	-198,317			-7,377,392			
Total										25,337,008			

Item: Scaffolding Works

Spec.: Handrail Assembling Type　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.273

Unit Price			Yen Conv.
MMK	USD	JPY	
11,247			936

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.40	2.50	3.50	24,300			85,050			Skilled Labour Corr. = 2.50 (P.39)
LBR-4	Scaffolder		day	7.70	2.50	19.25	20,300			390,775			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.20	2.50	3.00	13,500			40,500			Skilled Labour Corr. = 2.50 (P.39)
ERN-20	Rough Terrain Crane	25t	day	1.40	1.0	1.40	244,440			342,216			
SUN-5	Sundry Expenses	On labour and equipment rent costs	%	31.00	1.0	31.00	858,541			266,148			
Total										1,124,689			

【Notes】

● Including safety net

Item: Falsework

Spec.: Pipe Support Type　　Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.277

Unit Price			Yen Conv.
MMK	USD	JPY	
7,823			651

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.60	2.50	6.50	24,300			157,950			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	4.70	2.50	11.75	20,300			238,525			Skilled Labour Corr. = 2.50 (P.39)
LBR-4	Scaffolder		day	2.20	2.50	5.50	20,300			111,650			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	5.10	2.50	12.75	13,500			172,125			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	15.00	1.0	15.00	680,250			102,038			

【Notes】

● Falsework Resistance = Up to 40kN/m2

Total										782,288			

Item: Falsework

Spec.: Wedge Connection Type　　Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.277

Unit Price			Yen Conv.
MMK	USD	JPY	
7,343			611

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.40	2.50	3.50	24,300			85,050			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	1.30	2.50	3.25	20,300			65,975			Skilled Labour Corr. = 2.50 (P.39)
LBR-4	Scaffolder		day	3.30	2.50	8.25	20,300			167,475			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	3.30	2.50	8.25	13,500			111,375			Skilled Labour Corr. = 2.50 (P.39)
ERN-20	Rough Terrain Crane	25t	day	0.50	1.0	0.50	244,440			122,220			
SUN-5	Sundry Expenses	On labour and equipment rent costs	%	33.00	1.0	33.00	552,095			182,191			

【Notes】

● Falsework Resistance = Up to 40kN/m2

Total										734,286			

Item: Temporary Fence Works

Spec.: Installation & Removal　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.302

Unit Price			Yen Conv.
MMK	USD	JPY	
67,420			5,609

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Install】												
LBR-1	Foreman		day	0.29	1.50	0.44	24,300			10,692			1×10／D＝1×10／35＝0.29 days
LBR-3	Unskilled Labour		day	1.43	1.50	2.15	13,500			29,025			5×10／D＝5×10／35＝1.43 days
MAT-6004	Temporary Fence	Wooden	m	10.00	1.0	10.00	59,977			599,770			Disposal as Steel Scrap
SUN-1	Sundry Expenses	On labour costs	%	10.00	1.0	10.00	39,717			3,972			
	【Removal】												
LBR-1	Foreman		day	0.20	1.50	0.30	24,300			7,290			1×10／D＝1×10／49＝0.20 days
LBR-3	Unskilled Labour		day	1.02	1.50	1.53	13,500			20,655			5×10／D＝5×10／49＝1.02 days
SUN-1	Sundry Expenses	On labour costs	%	10.00	1.0	10.00	27,945			2,795			

【Notes】

- Install: Daily Construction Productivity (D) ＝35 m （Table 4.1 / P.301）
- Removal: Daily Construction Productivity (D) ＝49 m （Table 4.1 / P.301）

  Condition ① Base Type: Soil Embedded Post

  Condition ② Fence Height＝3.0 m

- JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total										674,199			

Item: Site Clearing Works

Spec.: Less than 50 trees/100 m2 Unit: 1,000 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2015 P.387/388

Unit Price			Yen Conv.
MMK	USD	JPY	
932			78

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Logging (Less than 50 trees/100 m2)】												
LBR-1	Foreman		day	0.75	1.50	1.13	24,300			27,459			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	2.20	1.50	3.30	16,200			53,460			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.15	1.50	0.23	13,500			3,105			Simple Labour Corr. = 1.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	9.00	1.0	9.00	84,024			7,562			
	【Stump Removal】												
LBR-1	Foreman		day	0.45	1.0	0.45	24,300			10,935			
EOP-25	Pin Grabber Coupler Backhoe	0.45m3	h	3.40	1/ 85%	4.00	40,718			162,872			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Ground Leveling】												
LBR-1	Foreman		day	0.54	1.0	0.54	24,300			13,122			
ERN-7	Backhoe	0.8m3	day	0.80	1/ 85%	0.94	298,760			280,834			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Mechanic Collection】												
LBR-1	Foreman		day	0.54	1.0	0.54	24,300			13,122			
LBR-3	Unskilled Labour		day	0.19	1.0	0.19	13,500			2,565			
EOP-25	Pin Grabber Coupler Backhoe	0.45m3	h	5.50	1/ 85%	6.47	40,718			263,445			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Transport】												
EOP-10	Truck Operation	2t	h	1.50	1.0	1.50	62,618			93,927			Transp. Dist. ≤ 5.5 km (Urban Area)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										932,408			

Item: Scaffolding Works

Spec.: Catwalk Type　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.387

Unit Price			Yen Conv.
MMK	USD	JPY	
5,064			421

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.10	2.50	0.25	24,300			6,075			Skilled Labour Corr. = 2.50 (P.39)
LBR-4	Scaffolder		day	0.40	2.50	1.00	20,300			20,300			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.40	2.50	1.00	13,500			13,500			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	27.00	1.00	27.00	39,875			10,766			
Total										50,641			

Item: Concrete Pavement

Spec.: Co 20/20cm　　Unit: 100 m2

Source:: Composite

Unit Price			Yen Conv.
MMK	USD	JPY	
37,911		1,478	4,632

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Pavement】												
ITEM-117	Concrete Surface Course	t=20cm (Manual Cast)	m2	100.00	1.0	100.00	23,641		1,478	2,364,100		147,800	
ITEM-47	Crush Stone Base Works	t=20cm	m2	100.00	1.0	100.00	14,270			1,427,000			
Total										3,791,100		147,800	

Item: Subgrade Preparation Works

Spec.: Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
703			58

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-3	Unskilled Labour		day	0.14	1.0	0.14	13,500			1,890			
EOP-16	Motor Grader Operation	3.1m	day	0.06	1/ 85%	0.07	387,539			27,128			100／D＝100／1,580＝0.06 days
EOP-17	Road Roller Operation	10～12t	day	0.06	1/ 85%	0.07	267,859			18,750			100／D＝100／1,580＝0.06 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.06	1/ 85%	0.07	321,233			22,486			100／D＝100／1,580＝0.06 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (D) ＝1,580 m2 (Table 3.2 / P.493)

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										70,254			

Item: Sub Base Layer (Carriage)

Spec.: t=25cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
17,176			1,429

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【First Layer＝15 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／1,110＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／1,110＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／1,110＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			
	【Second Layer＝10 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	10.00	1.27	12.70	46,500			590,550			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／0＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／0＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／0＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			

【Notes】

● Daily Construction Productivity (D) ＝1,110 m2 (Table 3.2 / P.493)

Layer thickness: up to 20 cm for subbase or up to 15cm for base layer

● First Layer Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3

● Second Layer Roadbed Material＝100×Layer Thickness＝100×0.10＝10.00 m3

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,717,633			

Item: Sub Base Layer (Carriage)

Spec.: t=30cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
20,129			1,675

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【First Layer＝15 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／1,110＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／1,110＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／1,110＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			
	【Second Layer＝15 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／0＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／0＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／0＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			

【Notes】

- Daily Construction Productivity (D) ＝1,110 m2 (Table 3.2 / P.493)

  Layer thickness: up to 20 cm for subbase or up to 15cm for base layer

- First Layer Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3
- Second Layer Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3
- JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										2,012,908			

Item: Sub Base Layer (Carriage)

Spec.: t=35cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
23,082			1,920

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【First Layer＝15 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／1,110＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／1,110＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／1,110＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			
	【Second Layer＝20 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	20.00	1.27	25.40	46,500			1,181,100			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／0＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／0＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／0＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			

【Notes】

- Daily Construction Productivity (D) ＝1,110 m2 (Table 3.2 / P.493)

  Layer thickness: up to 20 cm for subbase or up to 15cm for base layer

- First Layer Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3
- Second Layer Roadbed Material＝100×Layer Thickness＝100×0.20＝20.00 m3
- JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total				2,308,183		

Item: Base Layer (Carriage)

Spec.: t=15cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
10,065			837

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／1,110＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／1,110＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／1,110＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			

【Notes】

● Daily Construction Productivity (D) ＝1,110 m2 (Table 3.2 / P.493)

Layer thickness: up to 20 cm for subbase or up to 15cm for base layer

● Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3

● JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,006,454			

Item: Base Layer (Carriage)

Spec.: t=25cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.495

Unit Price			Yen Conv.
MMK	USD	JPY	
17,176			1,429

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【First Layer＝15 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	15.00	1.27	19.05	46,500			885,825			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／1,110＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／1,110＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／1,110＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			
	【Second Layer＝10 cm】												
LBR-3	Unskilled Labour		day	0.24	1.0	0.24	13,500			3,240			
MAT-3011	Roadbed material	C-40	m3	10.00	1.27	12.70	46,500			590,550			Loss Rate = +0.27 (Table 4.1 / P.494)
EOP-16	Motor Grader Operation	3.1m	day	0.09	1/ 85%	0.11	387,539			42,629			100／D＝100／0＝0.09 days
EOP-17	Road Roller Operation	10～12t	day	0.09	1/ 85%	0.11	267,859			29,464			100／D＝100／0＝0.09 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.09	1/ 85%	0.11	321,233			35,336			100／D＝100／0＝0.09 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	9.00	1.0	9.00	110,669			9,960			

【Notes】

- Daily Construction Productivity (D) ＝1,110 m2 (Table 3.2 / P.493)

  Layer thickness: up to 20 cm for subbase or up to 15cm for base layer

- First Layer Roadbed Material＝100×Layer Thickness＝100×0.15＝15.00 m3
- Second Layer Roadbed Material＝100×Layer Thickness＝100×0.10＝10.00 m3
- JICA Correction Coefficient: Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,717,633			

Item: Binder Course (Carriage)

Spec.: t=5cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.500

Unit Price			Yen Conv.
MMK	USD	JPY	
11,579			963

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.04	1/ 85%	0.05	24,300			1,215			1×100／D=1×100／2,300=0.04 days
LBR-2	Skilled Labour		day	0.13	1/ 85%	0.15	16,200			2,430			3×100／D=3×100／2,300=0.13 days
LBR-3	Unskilled Labour		day	0.26	1/ 85%	0.31	13,500			4,185			6×100／D=6×100／2,300=0.26 days
MAT-5001	Asphalt Mix	AC14	t	11.750	1.07	12.573	78,500			986,981			Loss Rate = +0.07 (Table 3.4 / P.497)
MAT-5002	Prime Coat		ℓ	126.00	1.0	126.00	700			88,200			Loss included in quantity
EOP-23	Asphalt Finisher Operation	2.4～6.0m	day	0.04	1/ 85%	0.05	644,800			32,240			1×100／D=1×100／2,300=0.04 days
EOP-17	Road Roller Operation	10～12t	day	0.04	1/ 85%	0.05	267,859			13,393			1×100／D=1×100／2,300=0.04 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.04	1/ 85%	0.05	321,233			16,062			1×100／D=1×100／2,300=0.04 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	19.00	1.0	19.00	69,525			13,210			

【Notes】

● Daily Construction Productivity (D) =2,300 m2 (Table 3.3 / P.497)

Condition ① Construction width: b ＞ 3.0m

●Pavement Density=2.35 t/m3 ⇒ 100×Layer Thickness×2.35=100×0.05×2.35=11.750 t

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.9/18) ⇒ Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,157,916			

Item: Binder Course (Carriage / Bridge Section)

Spec.: t=4cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.500

Unit Price			Yen Conv.
MMK	USD	JPY	
9,024			751

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.04	1/ 85%	0.05	24,300			1,215			1×100／D=1×100／2,300=0.04 days
LBR-2	Skilled Labour		day	0.13	1/ 85%	0.15	16,200			2,430			3×100／D=3×100／2,300=0.13 days
LBR-3	Unskilled Labour		day	0.26	1/ 85%	0.31	13,500			4,185			6×100／D=6×100／2,300=0.26 days
MAT-5001	Asphalt Mix	AC14	t	9.400	1.07	10.058	78,500			789,553			Loss Rate = +0.07 (Table 3.4 / P.497)
MAT-5003	Tack Coat		ℓ	43.00	1.0	43.00	700			30,100			Loss included in quantity
EOP-23	Asphalt Finisher Operation	2.4～6.0m	day	0.04	1/ 85%	0.05	644,800			32,240			1×100／D=1×100／2,300=0.04 days
EOP-17	Road Roller Operation	10～12t	day	0.04	1/ 85%	0.05	267,859			13,393			1×100／D=1×100／2,300=0.04 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.04	1/ 85%	0.05	321,233			16,062			1×100／D=1×100／2,300=0.04 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	19.00	1.0	19.00	69,525			13,210			

【Notes】

● Daily Construction Productivity (D) =2,300 m2 (Table 3.3 / P.497)

Condition ① Construction width: b ＞ 3.0m

●Pavement Density=2.35 t/m3 ⇒ 100×Layer Thickness×2.35=100×0.04×2.35=9.400 t

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.9/18) ⇒ Simple Equipment Corr. = 1/ 85% (P.51)

Total										902,388			

Item: Surface Course (Carriage)

Spec.: t=4cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.500

Unit Price			Yen Conv.
MMK	USD	JPY	
9,024			751

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.04	1/ 85%	0.05	24,300			1,215			1×100／D=1×100／2,300=0.04 days
LBR-2	Skilled Labour		day	0.13	1/ 85%	0.15	16,200			2,430			3×100／D=3×100／2,300=0.13 days
LBR-3	Unskilled Labour		day	0.26	1/ 85%	0.31	13,500			4,185			6×100／D=6×100／2,300=0.26 days
MAT-5001	Asphalt Mix	AC14	t	9.400	1.07	10.058	78,500			789,553			Loss Rate = +0.07 (Table 3.4 / P.497)
MAT-5003	Tack Coat		ℓ	43.00	1.0	43.00	700			30,100			Loss included in quantity
EOP-23	Asphalt Finisher Operation	2.4～6.0m	day	0.04	1/ 85%	0.05	644,800			32,240			1×100／D=1×100／2,300=0.04 days
EOP-17	Road Roller Operation	10～12t	day	0.04	1/ 85%	0.05	267,859			13,393			1×100／D=1×100／2,300=0.04 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.04	1/ 85%	0.05	321,233			16,062			1×100／D=1×100／2,300=0.04 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	19.00	1.0	19.00	69,525			13,210			

【Notes】

● Daily Construction Productivity (D) =2,300 m2 (Table 3.3 / P.497)

Condition ① Construction width: b ＞ 3.0m

●Pavement Density=2.35 t/m3 ⇒ 100×Layer Thickness×2.35=100×0.04×2.35=9.400 t

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.9/18) ⇒ Simple Equipment Corr. = 1/ 85% (P.51)

Total										902,388			

Item: Surface Course (Carriage)

Spec.: t=5cm　　Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.500

Unit Price			Yen Conv.
MMK	USD	JPY	
10,998			915

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.04	1/ 85%	0.05	24,300			1,215			1×100／D=1×100／2,300=0.04 days
LBR-2	Skilled Labour		day	0.13	1/ 85%	0.15	16,200			2,430			3×100／D=3×100／2,300=0.13 days
LBR-3	Unskilled Labour		day	0.26	1/ 85%	0.31	13,500			4,185			6×100／D=6×100／2,300=0.26 days
MAT-5001	Asphalt Mix	AC14	t	11.750	1.07	12.573	78,500			986,981			Loss Rate = +0.07 (Table 3.4 / P.497)
MAT-5003	Tack Coat		ℓ	43.00	1.0	43.00	700			30,100			Loss included in quantity
EOP-23	Asphalt Finisher Operation	2.4～6.0m	day	0.04	1/ 85%	0.05	644,800			32,240			1×100／D=1×100／2,300=0.04 days
EOP-17	Road Roller Operation	10～12t	day	0.04	1/ 85%	0.05	267,859			13,393			1×100／D=1×100／2,300=0.04 days
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	0.04	1/ 85%	0.05	321,233			16,062			1×100／D=1×100／2,300=0.04 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	19.00	1.0	19.00	69,525			13,210			

【Notes】

● Daily Construction Productivity (D) =2,300 m2 (Table 3.3 / P.497)

Condition ① Construction width: b ＞ 3.0m

●Pavement Density=2.35 t/m3 ⇒ 100×Layer Thickness×2.35=100×0.05×2.35=11.750 t

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.9/18) ⇒ Simple Equipment Corr. = 1/ 85% (P.51)

Total										1,099,816			

Item: Concrete Surface Course

Spec.: t=20cm (Manual Cast) Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.454

Unit Price			Yen Conv.
MMK	USD	JPY	
23,641		1,478	3,445

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.56	1.50	2.34	24,300			56,862			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	4.85	1.50	7.28	16,200			117,936			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	9.23	1.50	13.85	13,500			186,975			Simple Labour Corr. = 1.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	20.00	1.04	20.80	88,762			1,846,250			Loss Rate = +0.04 (Table 3.3 / P.452)
MAT-1007	Rebar Net	Φ6 / 150x150mm	m2	100.00	1.0	100.00			265			26,500	
MAT-1008	Rebar Net	Φ13 / 200x200mm	t	1.000	1.0	1.000			104,000			104,000	
MAT-1001	Deformed Reinforcing Bar	D10～D13 (SD345)	t	0.200	1.0	0.200			58,000			11,600	
	Pavement Joint Material	(Construction＋Main Material)×0.04	%	4.00	1.0	4.00	2,273,142		142,100	90,926		5,684	Eq. 3.2 (P. Ⅳ-1-⑤-2)
SUN-1	Sundry Expenses	On labour costs	%	18.00	1.0	18.00	361,773			65,119			

【Notes】

- Productivity for pavement width ≥ 20 cm
- Concrete＝0.20m×100m2＝20.0 m3
- Rebar Net＝20.0m3×0.05t/m3＝1.0 t
- Rebar＝20.0m3×0.01t/m3＝0.2 t
- Pavement joint material calculated according to Eq. 3.2 of MLIT Cost Estimate General Standard for Civil Works/2015 P.Ⅳ-1-⑤-2

Total			2,364,068		147,784	

Item: Interlocking Block Pavement

Spec.: t=6cm　　Unit: 100 m2

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.463

Unit Price			Yen Conv.
MMK	USD	JPY	
36,354			3,025

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.00	2.50	2.50	24,300			60,750			Skilled Labour Corr. = 2.50 (P.39)
LBR-9	Road Block Installer		day	3.30	2.50	8.25	20,300			167,475			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	5.30	2.50	13.25	13,500			178,875			Skilled Labour Corr. = 2.50 (P.39)
MAT-7031	Interlocking Block	t=6cm	m2	100.00	1.02	102.00	31,250			3,187,500			Loss Rate = +0.02 (Table 3.1 / P.463)
MAT-3007	Sand Blanket	t=3cm	m3	3.00	1.29	3.87	3,180			12,307			Loss Rate = +0.29 (Table 3.1 / P.463)
SUN-1	Sundry Expenses	On labour costs	%	7.00	1.0	7.00	407,100			28,497			

【Notes】

● Sand Blanket＝100×Layer Thickness＝100×0.03＝3.00 m3

Total										3,635,404			

Item: Guard Rail Installation

Spec.: Box Beam　　Unit: 100 m

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.421

Unit Price			Yen Conv.
MMK	USD	JPY	
163,508			13,604

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Material】												
MAT-2031	Box Beam	Gb-Bm-2B-2	m	100.00	1.0	100.00	159,255			15,925,500			
	【Installation】												
LBR-3	Unskilled Labour		day	21.00	1.50	31.50	13,500			425,250			Simple Labour Corr. = 1.50 (P.39)
Total										16,350,750			

Item: Road Marking Works

Spec.: Full Line 15cm　　Unit: 1,000 m

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.438

Unit Price			Yen Conv.
MMK	USD	JPY	
1,852			154

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.50	1.0	0.50	24,300			12,150			
LBR-2	Skilled Labour		day	1.10	1.0	1.10	16,200			17,820			
LBR-3	Unskilled Labour		day	2.10	1.0	2.10	13,500			28,350			
MAT-7032	Road Mark Paint	JIS K 5665	kg	570.00	1.0	570.00	1,923			1,096,110			Loss included in quantity
MAT-7033	Glass Beads	JIS R 3301	kg	25.00	1.0	25.00	1,803			45,075			Loss included in quantity
ERN-33	Line Marker	Hopper 80～130kg	day	0.67	1/ 85%	0.79	23,918			18,895			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-24	Road Marking Paint Preheater Operation	Double Tank Thermoplastic / 200～350kg	h	3.70	1/ 85%	4.35	9,389			40,842			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-10	Truck Operation	2t	h	3.20	1/ 85%	3.76	62,618			235,444			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-11	Truck Operation	3～3.5t	h	3.20	1/ 85%	3.76	62,893			236,478			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-15	Sundry Expenses	On labour, material and equipment rent/operation costs	%	7.00	1.0	7.00	1,731,164			121,181			

【Notes】

● Line Marker Rent＝3.7 h (Table 2.1 / P.435), Standard Operating Hours Per Year＝440 h, Standard Operating Days Per Year＝80 days ⇒ 3.7×80/440＝0.67 days

Total										1,852,345			

Item: Road Marking Works

Spec.: Dashed Line 15cm　　Unit: 1,000 m

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.438

Unit Price			Yen Conv.
MMK	USD	JPY	
2,009			167

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.60	1.0	0.60	24,300			14,580			
LBR-2	Skilled Labour		day	1.30	1.0	1.30	16,200			21,060			
LBR-3	Unskilled Labour		day	2.60	1.0	2.60	13,500			35,100			
MAT-7032	Road Mark Paint	JIS K 5665	kg	570.00	1.0	570.00	1,923			1,096,110			
MAT-7033	Glass Beads	JIS R 3301	kg	25.00	1.0	25.00	1,803			45,075			
ERN-33	Line Marker	Hopper 80～130kg	day	0.84	1/ 85%	0.99	23,918			23,679			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-24	Road Marking Paint Preheater Operation	Double Tank Thermoplastic / 200～350kg	h	4.60	1/ 85%	5.41	9,389			50,794			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-10	Truck Operation	2t	h	4.00	1/ 85%	4.71	62,618			294,931			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-11	Truck Operation	3～3.5t	h	4.00	1/ 85%	4.71	62,893			296,226			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-15	Sundry Expenses	On labour, material and equipment rent/operation costs	%	7.00	1.0	7.00	1,877,555			131,429			

【Notes】

● Line Marker Rent＝4.6 h (Table 2.1 / P.435), Standard Operating Hours Per Year＝440 h, Standard Operating Days Per Year＝80 days ⇒ 4.6×80/440＝0.84 days

Total										2,008,984			

Item: Road Marking Works

Spec.: Transversal Line 15cm　　Unit: 1,000 m

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.438

Unit Price			Yen Conv.
MMK	USD	JPY	
2,323			193

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.90	1.0	0.90	24,300			21,870			
LBR-2	Skilled Labour		day	1.80	1.0	1.80	16,200			29,160			
LBR-3	Unskilled Labour		day	3.60	1.0	3.60	13,500			48,600			
MAT-7032	Road Mark Paint	JIS K 5665	kg	570.00	1.0	570.00	1,923			1,096,110			
MAT-7033	Glass Beads	JIS R 3301	kg	25.00	1.0	25.00	1,803			45,075			
ERN-33	Line Marker	Hopper 80～130kg	day	1.16	1/ 85%	1.36	23,918			32,528			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-24	Road Marking Paint Preheater Operation	Double Tank Thermoplastic / 200～350kg	h	6.40	1/ 85%	7.53	9,389			70,699			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-10	Truck Operation	2t	h	5.60	1/ 85%	6.59	62,618			412,653			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-11	Truck Operation	3～3.5t	h	5.60	1/ 85%	6.59	62,893			414,465			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-15	Sundry Expenses	On labour, material and equipment rent/operation costs	%	7.00	1.0	7.00	2,171,160			151,981			

【Notes】

● Line Marker Rent＝6.4 h (Table 2.1 / P.435), Standard Operating Hours Per Year＝440 h, Standard Operating Days Per Year＝80 days ⇒ 6.4×80/440＝1.16 days

Total										2,323,141			

Item: Road Marking Works

Spec.: Arrow / Text Marking (Conv. to 15cm width) Unit: 1,000 m

Source:: MOC Cost Estimate Standard for Civil Works/1992 P.438

Unit Price			Yen Conv.
MMK	USD	JPY	
3,903			325

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	2.20	1.0	2.20	24,300			53,460			
LBR-2	Skilled Labour		day	4.40	1.0	4.40	16,200			71,280			
LBR-3	Unskilled Labour		day	8.90	1.0	8.90	13,500			120,150			
MAT-7032	Road Mark Paint	JIS K 5665	kg	570.00	1.0	570.00	1,923			1,096,110			
MAT-7033	Glass Beads	JIS R 3301	kg	25.00	1.0	25.00	1,803			45,075			
ERN-33	Line Marker	Hopper 80～130kg	day	2.85	1/ 85%	3.35	23,918			80,125			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-24	Road Marking Paint Preheater Operation	Double Tank Thermoplastic / 200～350kg	h	15.70	1/ 85%	18.47	9,389			173,415			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-10	Truck Operation	2t	h	13.60	1/ 85%	16.00	62,618			1,001,888			Simple Equipment Corr. = 1/ 85% (P.51)
EOP-11	Truck Operation	3～3.5t	h	13.60	1/ 85%	16.00	62,893			1,006,288			Simple Equipment Corr. = 1/ 85% (P.51)
SUN-15	Sundry Expenses	On labour, material and equipment rent/operation costs	%	7.00	1.0	7.00	3,647,791			255,345			

【Notes】

● Line Marker Rent＝15.7 h (Table 2.1 / P.435), Standard Operating Hours Per Year＝440 h, Standard Operating Days Per Year＝80 days ⇒ 15.7×80/440＝2.85 days

Total										3,903,136			

Item: Balustrade Installation

Spec.: Manual / Post Space 3m　　Unit: 100 m

Source:: MOC Cost Estimate Standard for Civil Works/1993 P.430

Unit Price			Yen Conv.
MMK	USD	JPY	
1,219			101

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-3	Unskilled Labour		day	5.90	1.50	8.85	13,500			119,475			Simple Labour Corr. = 1.50 (P.39)
	Balustrade		m	100.00	1.0	100.00							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	119,475			2,390			

【Notes】

● Balustrade Installation

Condition ① Concrete Foundation Type / Manual Installation

Condition ② Post Space: 3m

Total										121,865			

Item: Bridge Name Plate Installation Works

Spec.: Unit: 10 no

Source:: MOC Cost Estimate Standard for Civil Works/1993 P.444

Unit Price			Yen Conv.
MMK	USD	JPY	
2,327,849			193,677

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Post Install】												
LBR-1	Foreman		day	0.60	1.50	0.90	24,300			21,870			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	2.00	1.50	3.00	13,500			40,500			Simple Labour Corr. = 1.50 (P.39)
MAT-7034	Steel Post	Φ60.5mm / 4.5m	no	20.00	1.0	20.00	119,712			2,394,240			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
	【Plate Install】												
LBR-1	Foreman		day	0.50	1.50	0.75	24,300			18,225			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	1.70	1.50	2.55	13,500			34,425			Simple Labour Corr. = 1.50 (P.39)
MAT-7037	Bridge Nameplate	1800×1200	no	10.00	1.0	10.00	2,076,923			20,769,230			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										23,278,490			

Item: Block Installation

Spec.: Length ≤ 600 mm / Weight<50 kg　　Unit: 100 m

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.533

Unit Price			Yen Conv.
MMK	USD	JPY	
3,364			280

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.43	2.50	3.58	24,300			86,994			1×100／D＝1×100／70＝1.43 days
LBR-12	Precast Block Installer		day	2.86	2.50	7.15	17,500			125,125			2×100／D＝2×100／70＝2.86 days
LBR-3	Unskilled Labour		day	2.86	2.50	7.15	13,500			96,525			2×100／D＝2×100／70＝2.86 days
	Precast Block		no	166.67	1.0	166.67							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	9.00	1.0	9.00	308,644			27,778			

【Notes】

● Daily Construction Productivity (D) ＝70 m (Table 5.1 / P.533)

Condition ① Block length: L ≦ 600mm, Block weight: W ＜ 50kg

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										336,422			

Item: Asphalt Pav. Removal Works

Spec.: t≤10cm / Backhoe 0.45m3 Unit: 100 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2012 P.571

Unit Price			Yen Conv.
MMK	USD	JPY	
465			39

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.12	1/ 75%	0.16	24,300			3,888			100／Q3×1＝100／810×1＝0.12 days
LBR-3	Unskilled Labour		day	0.25	1/ 75%	0.33	13,500			4,455			100／Q3×2＝100／810×2＝0.25 days
EOP-4	Backhoe Operation	0.45m3	day	0.12	1/ 75%	0.16	229,940			36,790			100／Q3＝100／810＝0.12 days
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	3.00	1.00	3.00	45,133			1,354			

【Notes】

● Daily Construction Productivity (Q3) ＝810 m3 (Table 1.10 / P.570)

Condition ① Pavement thickness: Less or equal 10 cm

● JICA Correction Coefficient: Correct equipment productivity. Labour productivity is corrected with the same coefficient (P.11/18) ⇒ General Equipment Corr. = 1/ 75% (P.51)

Total										46,487			

Item: Abutment & Pier (Type 2)

Spec.: 24 N/mm2 Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.735

Unit Price			Yen Conv.
MMK	USD	JPY	
101,403			8,437

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.06	2.50	0.15	24,300			3,645			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	0.18	2.50	0.45	16,200			7,290			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.24	2.50	0.60	13,500			8,100			Skilled Labour Corr. = 2.50 (P.39)
MAT-3002	Concrete	24 N/mm2	m3	10.00	1.06	10.60	88,762			940,877			RC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	day	0.06	1.0	0.06	855,000			51,300			
SUN-13	Sundry Expenses	On labour and equipment rent/operation costs	%	4.00	1.0	4.00	70,335			2,813			
Total										1,014,025			

Item: Rebar Install

Spec.: D10～D13 (PC Girder) Unit: 1 t

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.625

Unit Price			Yen Conv.
MMK	USD	JPY	
348,310		62,640	91,619

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.60	2.50	1.50	24,300			36,450			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	4.00	2.50	10.00	20,300			203,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	2.80	2.50	7.00	13,500			94,500			Skilled Labour Corr. = 2.50 (P.39)
MAT-1001	Deformed Reinforcing Bar	D10～D13 (SD345)	t	1.000	1.08	1.080			58,000			62,640	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	4.30	1.0	4.30	333,950			14,360			
Total										348,310		62,640	

Item: Rebar Install

Spec.: D16～D25 (PC Girder) Unit: 1 t

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.625

Unit Price			Yen Conv.
MMK	USD	JPY	
348,310		60,480	89,459

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.60	2.50	1.50	24,300			36,450			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	4.00	2.50	10.00	20,300			203,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	2.80	2.50	7.00	13,500			94,500			Skilled Labour Corr. = 2.50 (P.39)
MAT-1002	Deformed Reinforcing Bar	D16～D25 (SD345)	t	1.000	1.08	1.080			56,000			60,480	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	4.30	1.0	4.30	333,950			14,360			
Total										348,310		60,480	

Item: PC Cable Install

Spec.: 7S15.2 (SWPR7BL) Unit: 100 m

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.625

Unit Price			Yen Conv.
MMK	USD	JPY	
7,449		3,147	3,767

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.20	2.50	3.00	49,000			147,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	4.70	2.50	11.75	32,667			383,837			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	4.30	2.50	10.75	13,500			145,125			Skilled Labour Corr. = 2.50 (P.39)
MAT-1005	PC Strand	7S15.2 (SWPR7BL)	t	0.771	1.05	0.810			331,000			268,110	Loss Rate = +0.05 (4-2 / P.621)
MAT-1006	Post Tension Duct	Φ65mm	m	100.00	1.04	104.00			448			46,592	Loss Rate = +0.04 (4-3 / P.621)
SUN-1	Sundry Expenses	On labour costs	%	10.20	1.0	10.20	675,962			68,948			

【Notes】

●PC Strand: 7 strands × 1.101 kg/m/strand × 100 m = 771 kg ⇒ 0.771 t

Total										744,910		314,702	

Item: Concrete

Spec.: 40N/mm2 (PC Girder) Unit: 10 m3

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.626

Unit Price			Yen Conv.
MMK	USD	JPY	
159,752		972	14,263

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.00	2.50	2.50	24,300			60,750			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	1.30	2.50	3.25	16,200			52,650			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	2.80	2.50	7.00	20,300			142,100			Skilled Labour Corr. = 2.50 (P.39)
LBR-4	Scaffolder		day	0.10	2.50	0.25	20,300			5,075			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	3.80	2.50	9.50	13,500			128,250			Skilled Labour Corr. = 2.50 (P.39)
MAT-3004	Concrete	40 N/mm2	m3	10.00	1.06	10.60	110,286			1,169,032			RC Concrete Loss Rate = 1.06 (P.46)
MAT-2007	Ceramic Insert	M12	no	34.00	1.0	34.00			286			9,724	
SUN-1	Sundry Expenses	On labour costs	%	10.00	1.0	10.00	388,825			38,883			Table 5.2 / P.622
	Electricity Cost	On labour Cost	%	0.20	1.0	0.20	388,825			778			Table 5.2 / P.622
Total										1,597,518		9,724	

Item: Prestressing Works

Spec.: 130t　　Unit: 10 cable

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.626

Unit Price			Yen Conv.
MMK	USD	JPY	
80,234		32,000	38,675

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.50	2.50	3.75	49,000			183,750			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	4.80	2.50	12.00	32,667			392,004			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	4.30	2.50	10.75	13,500			145,125			Skilled Labour Corr. = 2.50 (P.39)
MAT-2010	PC Strand Anchor Plate	130t	no	20.00	1.0	20.00			16,000			320,000	Freyssinet Method (130t)
SUN-1	Sundry Expenses	On labour costs	%	11.00	1.0	11.00	720,879			79,297			Table 6.1 / P.622
	Electricity Cost	On labour Cost	%	0.30	1.0	0.30	720,879			2,163			Table 6.1 Notes / P.622
Total										802,339		320,000	

Item: Temporary Storage

Spec.:

Unit: 1 no

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.626

Unit Price			Yen Conv.
MMK	USD	JPY	
378,544			31,495

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.50	2.50	1.25	49,000			61,250			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	3.10	2.50	7.75	32,667			253,169			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.90	2.50	4.75	13,500			64,125			Skilled Labour Corr. = 2.50 (P.39)
Total										378,544			

Item: Equipment Rent. Install & Removal

Spec.: Post Tension Girder　　Unit: 1 L.Sum

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.626/627

Unit Price			Yen Conv.
MMK	USD	JPY	
310,864,904			25,863,960

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Equipment Rent】												
STD-6	Prestressing Jack	1,300kN (130t)	total days	311.00	1.35	419.85	60,096			25,231,306			2×(A+C)=2×(150.5+5.0)=311.0 days
ERN-39	Gantry crane	3t	total days	153.50	1.35	207.23	56,971			11,806,100			1×(A+B)=1×(150.5+3.0)=153.5 days
ERN-40	Hanging Hoist	3t / Electric type	total days	153.50	1.35	207.23	10,505			2,176,951			1×(A+B)=1×(150.5+3.0)=153.5 days
MAT-6007	Rail	30kg/m	m	160.00	1.0	160.00	57,692			9,230,720			
ERN-13	Wheel Crane	25t	total days	3.00	1.35	4.05	244,440			989,982			1×B=1×3.0=3.0 days
STD-3	Girder Moving Equipments (40t)	Depreciation	total days	150.50	1.35	203.18	234,375			47,620,313			1×A=1×150.5=150.5 days
STD-4	Metallic Formwork	Depreciation	m2×days	27,993.00	1.35	37,790.55	4,724			178,522,558			
STD-5	Fabrication Support	Depreciation	m×days	18,662.00	1.35	25,193.70	1,226			30,887,476			
	Electricity Cost	On Girder Moving Equip. Cost	%	0.03	1.0	0.03	47,620,313			14,286			Table 8.1 Notes / P.623
	【Equipment Install & Removal】												
ITEM-136	Steel Base Formwork Works	Install & Removal	m	70.00	1.0	70.00	15,908			1,113,560			
ITEM-137	Steel Base Formwork Adjustment Works		no	40.00	1.0	40.00	41,995			1,679,800			
ITEM-138	Gantry Crane Install & Removal Works		no	1.00	1.0	1.00	564,812			564,812			
ITEM-139	Gantry Crane Rails Install & Removal Works		m (both rails)	80.00	1.0	80.00	12,838			1,027,040			

【Notes】

- Total Days (A)={n／s+(s-1)／s}×t={40／4+(4-1)／4}×14=150.5 days
  Girder Quantity (n)=40 no
  Girder Fabrication Slots (s)=4 no
  Fabrication Period per Girder (t)=14 days
- Gantry Crane Installation/Removal Period (B)=3.0 days
- Prestressing Jack Transport Period (C)=5.0 days
- JICA Correction Coefficient: Working Days Corr. = 1.35 (P.13)

Total										310,864,904			

Item: Steel Base Formwork Works

Spec.: Install & Removal　　Unit: 10 m

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.627

Unit Price			Yen Conv.
MMK	USD	JPY	
15,908			1,324

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.20	2.50	0.50	24,300			12,150			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	0.90	2.50	2.25	20,300			45,675			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	2.20	2.50	5.50	13,500			74,250			Skilled Labour Corr. = 2.50 (P.39)
LBR-10	Welder		day	0.50	2.50	1.25	21,600			27,000			Skilled Labour Corr. = 2.50 (P.39)
Total										159,075			

Item: Steel Base Formwork Adjustment Works

Spec.:

Unit: 1 no

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.627

Unit Price			Yen Conv.
MMK	USD	JPY	
41,995			3,494

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-8	Form Worker		day	0.62	2.50	1.55	20,300			31,465			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.31	2.50	0.78	13,500			10,530			Skilled Labour Corr. = 2.50 (P.39)
Total										41,995			

Item: Gantry Crane Install & Removal Works

Spec.: Unit: 1 no

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.627

Unit Price			Yen Conv.
MMK	USD	JPY	
564,812			46,992

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-15	Skilled Labour for Bridges		day	3.80	2.50	9.50	32,667			310,337			Skilled Labour Corr. = 2.50 (P.39)
LBR-11	Electrician		day	1.80	2.50	4.50	24,300			109,350			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	4.30	2.50	10.75	13,500			145,125			Skilled Labour Corr. = 2.50 (P.39)
Total										564,812			

Item: Gantry Crane Rails Install & Removal Works

Spec.:

Unit: 10 m (both rails)

Source:: MOC Cost Estimate Standard for Civil Works/2000 P.627

Unit Price			Yen Conv.
MMK	USD	JPY	
12,838			1,068

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.20	2.50	0.50	49,000			24,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	0.90	2.50	2.25	32,667			73,501			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.90	2.50	2.25	13,500			30,375			Skilled Labour Corr. = 2.50 (P.39)
Total										128,376			

Item: PC Girder Erection

Spec.: Truck Crane Erection Method　　Unit: 3.97 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.802

Unit Price			Yen Conv.
MMK	USD	JPY	
1,277,811			106,314

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	8.00	2.50	20.00	32,667			653,340			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	5.00	2.50	12.50	13,500			168,750			Skilled Labour Corr. = 2.50 (P.39)
ERN-17	Crawler Crane	200t	day	2.00	1.0	2.00	2,064,160			4,128,320			200 t × 2 cranes
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Girder Daily Erection Productivity (N)＝290 t (Table 3.2 / P.787) ⇒ Quantity of girders erected per day＝N／W＝290／73＝3.97 girders

Condition ① PC girder weight (W) =73 t

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										5,072,910			

Item: Girder Transportation (Short Distance)

Spec.: Heavy Load Vehicle　　Unit: 10 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.802

Unit Price			Yen Conv.
MMK	USD	JPY	
582,162			48,436

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Girder Transport Staff】												
LBR-14	Foreman for Bridges		day	3.02	2.50	7.55	49,000			369,950			1×10×W／N=1×10×73／242=3.02 days
LBR-15	Skilled Labour for Bridges		day	24.13	2.50	60.33	32,667			1,970,800			8×10×W／N=8×10×73／242=24.13 days
LBR-2	Skilled Labour		day	3.02	2.50	7.55	16,200			122,310			1×10×W／N=1×10×73／242=3.02 days
LBR-3	Unskilled Labour		day	15.08	2.50	37.70	13,500			508,950			5×10×W／N=5×10×73／242=15.08 days
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	2,972,010			89,160			
	【Equipment】												
EOP-28	Platform Truck Operation	60t / Self Propelled	total days	9.04	1.35	12.20	192,973			2,354,271			2 veh.×total days=2×4.52=9.04 days
STD-2	Erection Tools	For PC Girder Bridge	total days	4.52	1.35	6.10	66,587			406,181			Working Days Corr. = 1.35 (P.13)
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

【Girder Transport Staff】

● Girder Daily Transport Productivity (N)=242 t (Table 3.4 / P.789)

Condition① PC girder weight (W) =73 t

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

【Equipment】

● Total days=Transport days×Total Days rate=10×W／N×Total Days rate=10×73／242×1.5=4.52 days

Total days rate=1.5 (3－3－4 / P.789)

Total	5,821,622			

Item: Night Time Construction (Allowance)

Spec.: PC Girder　　Unit: 10 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<22>

Unit Price			Yen Conv.
MMK	USD	JPY	
545,390			45,376

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【PC Girder Erection】												
LBR-14	Foreman for Bridges		day	6.30	1.00	6.30	49,000			308,700			
LBR-15	Skilled Labour for Bridges		day	50.38	1.00	50.38	32,667			1,645,763			
LBR-3	Unskilled Labour		day	31.49	1.00	31.49	13,500			425,115			
LBR-6	Operator		day	5.04	1.00	5.04	20,300			102,312			
	【Girder Transport Staff】												
LBR-14	Foreman for Bridges		day	7.55	1.00	7.55	49,000			369,950			
LBR-15	Skilled Labour for Bridges		day	60.33	1.00	60.33	32,667			1,970,800			
LBR-2	Skilled Labour		day	7.55	1.00	7.55	16,200			122,310			
LBR-3	Unskilled Labour		day	37.70	1.00	37.70	13,500			508,950			

【Notes】

● Night Shift Allowance: 100%

Total										5,453,900			

Item: Rebar Works

Spec.: D10～D13 Unit: 1 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.805

Unit Price			Yen Conv.
MMK	USD	JPY	
313,766		62,640	88,745

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.80	2.50	2.00	24,300			48,600			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	3.80	2.50	9.50	20,300			192,850			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.70	2.50	4.25	13,500			57,375			Skilled Labour Corr. = 2.50 (P.39)
MAT-1001	Deformed Reinforcing Bar	D10～D13 (SD345)	t	1.00	1.08	1.08			58,000			62,640	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	5.00	1.0	5.00	298,825			14,941			
Total										313,766		62,640	

Item: Rebar Works

Spec.: D16～D25 Unit: 1 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.805

Unit Price			Yen Conv.
MMK	USD	JPY	
313,766		60,480	86,585

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.80	2.50	2.00	24,300			48,600			Skilled Labour Corr. = 2.50 (P.39)
LBR-5	Rebar Worker		day	3.80	2.50	9.50	20,300			192,850			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.70	2.50	4.25	13,500			57,375			Skilled Labour Corr. = 2.50 (P.39)
MAT-1002	Deformed Reinforcing Bar	D16～D25 (SD345)	t	1.00	1.08	1.08			56,000			60,480	Rebar Loss Rate = 1.08 (P.46)
SUN-1	Sundry Expenses	On labour costs	%	5.00	1.0	5.00	298,825			14,941			
Total										313,766		60,480	

Item: Concrete Works

Spec.: 30N/mm2 (Cross Girder) Unit: 10 m3

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.805

Unit Price			Yen Conv.
MMK	USD	JPY	
263,676			21,938

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	2.90	2.50	7.25	49,000			355,250			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	9.30	2.50	23.25	20,300			471,975			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	9.10	2.50	22.75	13,500			307,125			Skilled Labour Corr. = 2.50 (P.39)
MAT-3003	Concrete	30 N/mm2	m3	10.00	1.06	10.60	97,810			1,036,786			RC Concrete Loss Rate = 1.06 (P.46)
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	1.50	1.0	1.50	124,636			186,954			
SUN-1	Sundry Expenses	On labour costs	%	9.00	1.0	9.00	1,296,350			116,672			
Total										2,636,762			

Item: PC Cable Installation Works

Spec.: 4S15.2 (SWPR7BL) Unit: 100 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.806

Unit Price			Yen Conv.
MMK	USD	JPY	
4,014		1,529	1,863

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.70	2.50	1.75	49,000			85,750			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	2.60	2.50	6.50	32,667			212,336			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.60	2.50	4.00	13,500			54,000			Skilled Labour Corr. = 2.50 (P.39)
MAT-1004	PC Strand	4S15.2 (SWPR7BL)	t	0.440	1.05	0.462			331,000			152,922	Loss Rate = +0.05 (Table 5.7 / P.793)
SUN-1	Sundry Expenses	On labour costs	%	14.00	1.0	14.00	352,086			49,292			

【Notes】

●PC Strand: 4 strands × 1.101 kg/m/strand × 100 m = 440 kg ⇒ 0.440 t

Total										401,378		152,922	

Item: Prestressing Works

Spec.: 700kN (70t) Unit: 10 cable

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.806

Unit Price			Yen Conv.
MMK	USD	JPY	
21,433		38,900	40,683

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.60	2.50	1.50	49,000			73,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	1.40	2.50	3.50	32,667			114,335			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.60	2.50	1.50	13,500			20,250			Skilled Labour Corr. = 2.50 (P.39)
MAT-2008	PC Strand Anchor Plate	70t	no	10.00	1.0	10.00			16,000			160,000	Freyssinet Method (130t)
MAT-2009	PC Strand Anchor Plate (Fix Side)	70t	no	10.00	1.0	10.00			22,900			229,000	Freyssinet Method (130t)
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	208,085			6,243			
Total										214,328		389,000	

Item-148

Item:	Equipment Rental/Depreciation			
Spec.:	For Cross Girder Works	Unit: 1	L.Sum	
Source::	MLIT Cost Estimate Standard for Civil Works/2016 P.806			

Unit Price			Yen Conv.
MMK	USD	JPY	
1,020,430			84,900

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
STD-6	Prestressing Jack	1,300kN (130t)	total days	12.58	1.35	16.98	60,096			1,020,430			n／N×K×1.5＝260／31×1.5＝12.58 days
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

- PC Cable Prestressing (One Side) Daily Productivity (N) ＝31 cables (Table 5.9 / P.794)
- Quantity of Cables (K×n)＝260 cables
- JICA Correction Coefficient: Working Days Corr. = 1.35 (P.13)

Total				1,020,430			

Item: PC Precast Panels Sealing Works

Spec.: Unit: 100 m (both sides)

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.808

Unit Price			Yen Conv.
MMK	USD	JPY	
20,846			1,734

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.40	2.50	1.00	49,000			49,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.30	2.50	3.25	13,500			43,875			Skilled Labour Corr. = 2.50 (P.39)
MAT-7039	Joint Seal for RC Plates	10×15mm	m	205.00	1.0	205.00	4,688			961,040			Loss included in quantity
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	0.36	1.0	0.36	2,850,050			1,026,018			Loss included in quantity
SUN-1	Sundry Expenses	On labour costs	%	5.00	1.0	5.00	92,875			4,644			
Total										2,084,577			

Item-150

Item: Temporary Storage

Spec.: For PC Precast Panels　　Unit: 100 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.808

Unit Price			Yen Conv.
MMK	USD	JPY	
6,594			549

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.80	2.50	2.00	49,000			98,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	2.90	2.50	7.25	32,667			236,836			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.20	2.50	0.50	13,500			6,750			Skilled Labour Corr. = 2.50 (P.39)
ERN-20	Rough Terrain Crane	25t	day	1.30	1.0	1.30	244,440			317,772			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										659,358			

Item: PC Precast Panels Installation Works

Spec.: Unit: 10 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.808

Unit Price			Yen Conv.
MMK	USD	JPY	
305,229			25,395

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.20	2.50	0.50	49,000			24,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-15	Skilled Labour for Bridges		day	0.90	2.50	2.25	32,667			73,501			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.20	2.50	0.50	13,500			6,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-7001	PC Precast Panel		no	10.00	1.0	10.00	289,865			2,898,650			
ERN-20	Rough Terrain Crane	25t	day	0.20	1.0	0.20	244,440			48,888			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										3,052,289			

Item: RC Precast Panels Joint Works

Spec.: Unit: 100 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.809

Unit Price			Yen Conv.
MMK	USD	JPY	
2,533			211

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.10	2.50	0.25	49,000			12,250			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.10	2.50	2.75	13,500			37,125			Skilled Labour Corr. = 2.50 (P.39)
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	0.07	1.0	0.07	2,850,050			199,504			Loss included in quantity
SUN-1	Sundry Expenses	On labour costs	%	9.00	1.0	9.00	49,375			4,444			
Total										253,323			

Item: Formworks

Spec.: PC Slab (Border/Hanging Portion) Unit: 100 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.809

Unit Price			Yen Conv.
MMK	USD	JPY	
41,393			3,444

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	12.10	2.50	30.25	49,000			1,482,250			Skilled Labour Corr. = 2.50 (P.39)
LBR-8	Form Worker		day	26.80	2.50	67.00	20,300			1,360,100			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	11.60	2.50	29.00	13,500			391,500			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	28.00	1.0	28.00	3,233,850			905,478			
Total										4,139,328			

Item: Non-shrink Grout

Spec.: Premix Cement Type　　Unit: 1 m3

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-⑨-11

Unit Price			Yen Conv.
MMK	USD	JPY	
2,850,050			237,124

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
MAT-3009	Non-shrink Mortar		kg	1,875.00	1.0	1,875.00	1,502			2,816,250			Loss included in quantity
MAT-3006	Water	For Concrete	ℓ	338.00	1.0	338.00	100			33,800			Loss included in quantity
Total										2,850,050			

Item: Bent Foundation Install & Removal

Spec.: Plate Girder　　Unit: 120.4 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.754

Unit Price			Yen Conv.
MMK	USD	JPY	
26,364			2,193

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	3.65	2.50	9.13	49,000			447,370			A／Da×1＝120.4／33×1＝3.65 days
LBR-15	Skilled Labour for Bridges		day	7.30	2.50	18.25	32,667			596,173			A／Da×2＝120.4／33×2＝7.30 days
LBR-3	Unskilled Labour		day	3.65	2.50	9.13	13,500			123,255			A／Da×1＝120.4／33×1＝3.65 days
	Bent Foundation	Bent Depreciation Value×4%	%	4.00	1.0	4.00	50,185,062			2,007,402			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (Da) ＝A／(0.029×A＋0.14)＝120.4／(0.029×120.4＋0.14)＝33 m2

Condition ① Bent Foundation Area (A)＝ΣAi＝i×{(B＋2)×(0.15×h＋1.5)}＝4×{(10.4＋2)×(0.15×6.2＋1.5)}＝120.4 m2

Condition ② Bent Average Height (h)＝6.2 m, External Web～External Web Distance (B)＝10.4 m, Quantity (i)＝4 places

●Bent Foundation Depreciation ⇒ Bent Depreciation Value×4% (MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-③-15)

Refer to Item-156 for bent depreciation value

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										3,174,200			

Item: Bent Install & Removal

Spec.: Plate Girder　　Unit: 79.600 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.754

Unit Price			Yen Conv.
MMK	USD	JPY	
743,790			61,883

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	12.06	2.50	30.15	49,000			1,477,350			T／Dt×1＝79.6／6.6×1＝12.06 days
LBR-15	Skilled Labour for Bridges		day	60.30	2.50	150.75	32,667			4,924,550			T／Dt×5＝79.6／6.6×5＝60.30 days
LBR-3	Unskilled Labour		day	12.06	2.50	30.15	13,500			407,025			T／Dt×1＝79.6／6.6×1＝12.06 days
ERN-43	Bent		t×days	5,922.24	1.0	5,922.24	8,474			50,185,062			
	Scaffold for Bent	Bent Depreciation Value×4%	%	4.00	1.0	4.00	50,185,062			2,007,402			
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	6,808,925			204,268			

【Notes】

● Daily Construction Productivity (Dt) ＝T／(0.14×T＋1.0)＝79.6／(0.14×79.6＋1.0)＝6.6 t

Condition ① Rough Terrain Crane Erection

Condition ② Bent Total Weight (T)＝ΣTi＝i×[0.372×(B＋1.5)＋{4.097×n＋0.372×(B＋1.5)}×h／10]＝4×[0.372×(10.4＋1.5)＋{4.097×5＋0.372×(10.4＋1.5)}×6.2／10]＝79.6 t

Condition ③ Bent Average Height (h)＝6.2 m, External Web～External Web Distance (B)＝10.4 m, Quantity (i)＝4 places

Condition ④ Quantity of Columns per Bent (n)＝5 columns

● Scaffold for Bent Depreciation ⇒ Bent Depreciation Value×4% (MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-③-15)

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total	59,205,657			

Item: Scaffolding Works

Spec.: Plate Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.746～748

Unit Price			Yen Conv.
MMK	USD	JPY	
11,048,717			919,253

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Main Scaffold	{L1＋L2×T1＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	5,204						
	Scaffold Interm. Layer	{L1＋L2×T2＋(N1＋N2)×y}×A	m2	1,555.50	1.0	1,555.50	3,966			6,169,113			
	Safety Route	{L1＋L2×T3＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	1,358						
	Partial Working Floor	{L1＋L2×T4＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	901						
	Scaffold Netting	{L1＋L2×T5＋(N1＋N2)×y}×A	m2	1,555.50	1.0	1,555.50	3,137			4,879,604			
	Slab Aditional Scaffold	{L1＋L2×T6}×A	m2	0.00	1.0	0.00	180						

【Notes】

● Estimation Conditions

Condition ① Pipe Scaffold (For Plate Girder or Box Girder)

Condition ② Bridge Area (A)＝1,555.5 m2

Condition ③ Skilled Labour for Bridges (JPY/day) (y)＝2,718円 (MMK 32,667/day), Installation Coefficient (N1) & Removal Coefficient (N2) corrected with Skilled Labour Coefficient

Main Scaffold Months Used: T1＝0.0 months // L1＝120、 L2＝98、 N1=0.027、 N2=0.019 (Table 13.1 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Main Scaffold Unit Cost＝L1＋L2×T1＋(N1＋N2)×Skilled Labour Coefficient×y＝120＋98×0.0＋(0.027+0.019)×2.5×2,718＝433円 ⇒ MMK 5,204/m2

Scaffold Intermediary Layer: T2＝1.5 months // L1＝88、 L2＝75、 N1=0.012、 N2=0.007 (Table 13.2 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Scaffold Intermediary Layer Unit Cost＝L1＋L2×T2＋(N1＋N2)×Skilled Labour Coefficient×y＝88＋75×1.5＋(0.012+0.007)×2.5×2,718＝330円 ⇒ MMK 3,966/m2

Safety Route Months Used: T3＝0.0 months // L1＝25、 L2＝20、 N1=0.008、 N2=0.005 (Table 13.3 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Safety Route Unit Cost＝L1＋L2×T3＋(N1＋N2)×Skilled Labour Coefficient×y＝25＋20×0.0＋(0.008+0.005)×2.5×2,718＝113円 ⇒ MMK 1,358/m2

Partial Working Floor Months Used: T4＝0.0 months // L1＝27、 L2＝25、 N1=0.004、 N2=0.003 (Table 13.4 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Partial Working Floor Unit Cost＝L1＋L2×T4＋(N1＋N2)×Skilled Labour Coefficient×y＝27＋25×0.0＋(0.004+0.003)×2.5×2,718＝75円 ⇒ MMK 901/m2

Scaffold Netting Months Used: T5＝1.5 months // L1＝50、 L2＝41、 N1=0.013、 N2=0.009 (Table 13.5 / P.748) // Skilled Labour Corr. = 2.50 (P.39)

Scaffold Netting Unit Cost＝L1＋L2×T5＋(N1＋N2)×Skilled Labour Coefficient×y＝50＋41×1.5＋(0.013+0.009)×2.5×2,718＝261円 ⇒ MMK 3,137/m2

Slab Aditional Scaffold: T6＝0.0 months // L1＝15、 L2＝11 (Table 13.6 / P.748)

Slab Aditional Scaffold＝L1＋L2×T6＝15＋11×0.0＝15円 ⇒ MMK 180/m2

Total										11,048,717			

Item: Anti Falling. Obj. Net & Temp. Access

Spec.: Plate Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.749～750

Unit Price			Yen Conv.
MMK	USD	JPY	
1,321,584			109,956

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Falling Object Protection	{L1＋L2×T8＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	4,868						
	Temporary Access	{L2×T11＋(N1＋N2)×y}×H	m	12.00	1.0	12.00	110,132			1,321,584			

【Notes】

● Estimation Conditions

Condition ① Pipe Scaffold (For Plate Girder or Box Girder)

Condition ② Bridge Area (A)＝1,555.5 m2

Condition ③ Skilled Labour for Bridges (JPY/day) (y)＝2,718円 (MMK 32,667/day), Installation Coefficient (N1) & Removal Coefficient (N2) corrected with Skilled Labour Coefficient

Falling Object Protection Months Used: T8＝0.0 months // L1＝140、 L2＝161、 N1=0.027、 N2=0.012 (Table 13.9 / P.749) // Skilled Labour Corr. = 2.50 (P.39)

Falling Object Protection Unit Cost＝L1＋L2×T8＋(N1＋N2)×Skilled Labour Coefficient×y＝140＋161×0.0＋(0.027+0.012)×2.5×2,718＝405円 ⇒ MMK 4,868/m2

Temporary Access Months Used: T11＝1.5 months // L2＝2,942、 N1=0.407、 N2=0.292 (13-3-2 / P.750) // Skilled Labour Corr. = 2.50 (P.39)

Temporary Access Unit Cost＝L2×T11＋(N1＋N2)×Skilled Labour Coefficient×y＝2,942×1.5＋(0.407+0.292)×2.5×2,718＝9,163円 ⇒ MMK 110,132/m

Total	1,321,584			

Item: In Situ Assembly Works

Spec.: Plate Girder　　Unit: 282.720 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
20,108			1,673

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	9.68	2.50	24.20	49,000			1,185,800			G／Dg×1＝282.720／29.2×1＝9.68 days
LBR-15	Skilled Labour for Bridges		day	48.41	2.50	121.03	32,667			3,953,687			G／Dg×5＝282.720／29.2×5＝48.41 days
LBR-3	Unskilled Labour		day	9.68	2.50	24.20	13,500			326,700			G／Dg×1＝282.720／29.2×1＝9.68 days
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	5,466,187			218,647			

【Notes】

● Daily Construction Productivity (Dg) ＝G／{0.032×(G+20)}＝282.72／{0.032×(282.72＋20)}＝29.2 t

Condition ① Plate Girder Bridge Type

Condition ② In Situ Assembly Weight (G)＝282.72 t

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										5,684,834			

Item: Erection Works

Spec.: Plate Girder　　Unit: 371.400 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.752

Unit Price			Yen Conv.
MMK	USD	JPY	
20,205			1,681

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	12.42	2.50	31.05	49,000			1,521,450			W／Dw×1＝371.400／29.9×1＝12.42 days
LBR-15	Skilled Labour for Bridges		day	62.11	2.50	155.28	32,667			5,072,532			W／Dw×5＝371.400／29.9×5＝62.11 days
LBR-3	Unskilled Labour		day	12.42	2.50	31.05	13,500			419,175			W／Dw×1＝371.400／29.9×1＝12.42 days
SUN-1	Sundry Expenses	On labour costs	%	7.00	1.0	7.00	7,013,157			490,921			

【Notes】

● Daily Construction Productivity (Dw) ＝W／[0.27×a×(n＋11)]＝371.400／[0.27×1.000×(35＋11)]＝29.900 t

Condition ① Truck Crane Erection (Plate Girder)

Condition ② Bridge Main Components Total Weight (W)＝371.400 t, Main Girder Weight＝328.856 t, Main Girder Erection Operations (n)＝35

Condition ③ Block Weight Coefficient: Block Weight＝Main Girder Weight／Main Girder Erection Operations＝328.856／35＝9.396 t ⇒ a＝1.0 (Annex Table-1 / P.741)

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										7,504,078			

Item: Bolt Tightening Works

Spec.: Plate Girder　　Unit: 17,944 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.752

Unit Price			Yen Conv.
MMK	USD	JPY	
324			27

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	9.54	2.50	23.85	49,000			1,168,650			Q／Dq×1＝17,944／1,880×1＝9.54 days
LBR-15	Skilled Labour for Bridges		day	47.72	2.50	119.30	32,667			3,897,173			Q／Dq×5＝17,944／1,880×5＝47.72 days
LBR-3	Unskilled Labour		day	9.54	2.50	23.85	13,500			321,975			Q／Dq×1＝17,944／1,880×1＝9.54 days
	Torshear High Strengh Bolt		no	17,944.00	1.0	17,944.00							Calculated in Separated
SUN-1	Sundry Expenses	On labour costs	%	8.00	1.0	8.00	5,387,798			431,024			

【Notes】

● Daily Construction Productivity (Dq) ＝Q／{0.52×Q／1000＋0.19}＝17,944／(0.52×17,944／1,000＋0.19)＝1,880 no

Condition ① Bolt Tightening Quantity (Q)＝17,944 no

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total				5,818,822		

Item: Erection Equipments Cost

Spec.: Plate Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.753

Unit Price			Yen Conv.
MMK	USD	JPY	
48,917,798			4,069,961

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-16	Crawler Crane	100t	total days	22.10	1.35	29.84	814,800			24,313,632			Working Days Corr. = 1.35 (P.13)
ERN-20	Rough Terrain Crane	25t	total days	5.90	1.35	7.97	244,440			1,948,187			Working Days Corr. = 1.35 (P.13)
STD-1	Erection Tools	Assembling & Bolt Tightening Tools	total days	74.40	1.35	100.44	113,822			11,432,282			Working Days Corr. = 1.35 (P.13)
ERN-36	Generator	37/45kVA	total days	74.40	1.35	100.44	74,418			7,474,544			Working Days Corr. = 1.35 (P.13)
ERN-45	Temporary Tightening Bolt	M22×90	100×total days	2,243.25	1.35	3,028.39	577			1,747,381			Working Days Corr. = 1.35 (P.13)
ERN-46	Drift Pin	Φ24.5×150	100×total days	1,121.63	1.35	1,514.20	1,322			2,001,772			Working Days Corr. = 1.35 (P.13)

【Notes】

● Construction Tasks Duration

A: Erection Time＝W／Dw＝371.400／29.9＝12.4 days

B: In Situ Assembly Time＝G／Dg＝282.720／29.2＝9.7 days

C: Bearing Installation Time＝N／Dn＝10／7.3＋10／2.2＝5.9 days

D: Bridge Anti-Falling System Install Time＝K／Dk＝0 days

E: Bent Install & Removal Time＝T／Dt＝79.600／6.6＝12.1 days

F: Cable Crane Install & Removal Time＝0 days

G: Cable Erection Install & Removal Time＝0 days

H: Bolt Tightening Time＝Q／Dq＝17,944／1,880＝9.5 days

I: Short Distance Transport＝0 days

● Erection Equipment Total Days

Main Crane Total Days＝A＋B＝12.4＋9.7＝22.10 total days

Auxiliar Crane Total Days＝C＋D＋I＝5.9＋0.0＋0.0＝5.90 total days

Erection Tools Total Days＝(A＋B＋C＋D＋E＋(F or G)＋H)×1.5＝(12.4＋9.7＋5.9＋0.0＋12.1＋0.0＋0.0＋9.5)×1.5＝74.40 total days

Generator Total Days＝(A＋B＋C＋E＋(F or G)＋H)×1.5＝(12.4＋9.7＋5.9＋12.1＋0.0＋0.0＋9.5)×1.5＝74.40 total days

Temporary Tightening Bolt Total Days＝(A＋B＋C＋(F or G)＋H)×1.5＝(12.4＋9.7＋5.9＋0.0＋0.0＋9.5)×1.5＝56.25 total days ⇒ 56.25×3,988／100＝2,243.25 100×total days

Temporary Tightening Bolt Quantity＝Main Bolt Quantity×1/3×2/3＝17,944×1/3×2/3＝3,988 no (Table 3.3 / P. 738)

Drift Pin Total Days＝(A＋B＋C＋(F or G)＋H)×1.5＝(12.4＋9.7＋5.9＋0.0＋0.0＋9.5)×1.5＝56.25 total days ⇒ 56.25×1,994／100＝1,121.63 100×total days

Drift Pin Quantity＝Main Bolt Quantity×1/3×1/3＝17,944×1/3×1/3＝1,994 no (Table 3.3 / P. 738)

Total	48,917,798			

Item: Night Time Construction (Allowance)

Spec.: Plate Girder　　Unit: 371.400 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<22>

Unit Price			Yen Conv.
MMK	USD	JPY	
35,021			2,914

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Plate Girder Erection】												
LBR-14	Foreman for Bridges		day	31.05	1.00	31.05	49,000			1,521,450			
LBR-15	Skilled Labour for Bridges		day	155.28	1.00	155.28	32,667			5,072,532			
LBR-3	Unskilled Labour		day	31.05	1.00	31.05	13,500			419,175			
LBR-6	Operator		day	29.84	1.00	29.84	20,300			605,752			
	【Bolt Tightening Works】												
LBR-14	Foreman for Bridges		day	23.85	1.00	23.85	49,000			1,168,650			
LBR-15	Skilled Labour for Bridges		day	119.30	1.00	119.30	32,667			3,897,173			
LBR-3	Unskilled Labour		day	23.85	1.00	23.85	13,500			321,975			

【Notes】

● Night Shift Allowance: 100%

Total										13,006,707			

Item: Bent Foundation Install & Removal

Spec.: Box Girder　　Unit: 233.1 m2

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.754

Unit Price			Yen Conv.
MMK	USD	JPY	
32,969			2,743

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	6.86	2.50	17.15	49,000			840,350			A／Da×1＝233.1／34×1＝6.86 days
LBR-15	Skilled Labour for Bridges		day	13.71	2.50	34.28	32,667			1,119,825			A／Da×2＝233.1／34×2＝13.71 days
LBR-3	Unskilled Labour		day	6.86	2.50	17.15	13,500			231,525			A／Da×1＝233.1／34×1＝6.86 days
	Bent Foundation	Bent Depreciation Value×4%	%	4.00	1.0	4.00	137,333,712			5,493,348			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							

【Notes】

● Daily Construction Productivity (Da) ＝A／(0.029×A＋0.14)＝233.1／(0.029×233.1＋0.14)＝34 m2

Condition ① Bent Foundation Area (A)＝ΣAi＝i×{(B＋2)×(0.15×h＋1.5)}＝9×{(8.6＋2)×(0.15×6.3＋1.5)}＝233.1 m2

Condition ② Bent Average Height (h)＝6.3 m, External Web～External Web Distance (B)＝8.6 m, Quantity (i)＝9 places

●Bent Foundation Depreciation ⇒ Bent Depreciation Value×4% (MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-③-15)

Refer to Item-165 for bent depreciation value

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										7,685,048			

Item: Bent Install & Removal

Spec.: Box Girder　　Unit: 147.600 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.754

Unit Price			Yen Conv.
MMK	USD	JPY	
1,053,190			87,625

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	21.71	2.50	54.28	49,000			2,659,720			T／Dt×1＝147.6／6.8×1＝21.71 days
LBR-15	Skilled Labour for Bridges		day	108.53	2.50	271.33	32,667			8,863,537			T／Dt×5＝147.6／6.8×5＝108.53 days
LBR-3	Unskilled Labour		day	21.71	2.50	54.28	13,500			732,780			T／Dt×1＝147.6／6.8×1＝21.71 days
ERN-43	Bent		t×days	16,206.48	1.0	16,206.48	8,474			137,333,712			
	Scaffold for Bent	Bent Depreciation Value×4%	%	4.00	1.0	4.00	137,333,712			5,493,348			
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	12,256,037			367,681			

【Notes】

● Daily Construction Productivity (Dt) ＝T／(0.14×T＋1.0)＝147.6／(0.14×147.6＋1.0)＝6.8 t

Condition ① Rough Terrain Crane Erection

Condition ② Bent Total Weight (T)＝ΣTi＝i×[0.372×(B＋1.5)＋{4.097×n＋0.372×(B＋1.5)}×h／10]＝9×[0.372×(8.6＋1.5)＋{4.097×4＋0.372×(8.6＋1.5)}×6.3／10]＝147.6 t

Condition ③ Bent Average Height (h)＝6.3 m, External Web～External Web Distance (B)＝8.6 m, Quantity (i)＝9 places

Condition ④ Quantity of Columns per Bent (n)＝4 columns

● Scaffold for Bent Depreciation ⇒ Bent Depreciation Value×4% (MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-③-15)

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										155,450,778			

Item: Scaffolding Works

Spec.: Box Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.746～748

Unit Price			Yen Conv.
MMK	USD	JPY	
16,301,385			1,356,275

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Main Scaffold	{L1＋L2×T1＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	5,204						
	Scaffold Interm. Layer	{L1＋L2×T2＋(N1＋N2)×y}×A	m2	2,295.00	1.0	2,295.00	3,966			9,101,970			
	Safety Route	{L1＋L2×T3＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	1,358						
	Partial Working Floor	{L1＋L2×T4＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	901						
	Scaffold Netting	{L1＋L2×T5＋(N1＋N2)×y}×A	m2	2,295.00	1.0	2,295.00	3,137			7,199,415			
	Slab Aditional Scaffold	{L1＋L2×T6}×A	m2	0.00	1.0	0.00	180						

【Notes】

● Estimation Conditions

Condition ① Pipe Scaffold (For Plate Girder or Box Girder)

Condition ② Bridge Area (A)＝2,295.0 m2

Condition ③ Skilled Labour for Bridges (JPY/day) (y)＝2,718円 (MMK 32,667/day), Installation Coefficient (N1) & Removal Coefficient (N2) corrected with Skilled Labour Coefficient

Main Scaffold Months Used: T1＝0.0 months // L1＝120、 L2＝98、 N1=0.027、 N2=0.019 (Table 13.1 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Main Scaffold Unit Cost＝L1＋L2×T1＋(N1＋N2)×Skilled Labour Coefficient×y＝120＋98×0.0＋(0.027+0.019)×2.5×2,718＝433円 ⇒ MMK 5,204/m2

Scaffold Intermediary Layer: T2＝1.5 months // L1＝88、 L2＝75、 N1=0.012、 N2=0.007 (Table 13.2 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Scaffold Intermediary Layer Unit Cost＝L1＋L2×T2＋(N1＋N2)×Skilled Labour Coefficient×y＝88＋75×1.5＋(0.012+0.007)×2.5×2,718＝330円 ⇒ MMK 3,966/m2

Safety Route Months Used: T3＝0.0 months // L1＝25、 L2＝20、 N1=0.008、 N2=0.005 (Table 13.3 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Safety Route Unit Cost＝L1＋L2×T3＋(N1＋N2)×Skilled Labour Coefficient×y＝25＋20×0.0＋(0.008+0.005)×2.5×2,718＝113円 ⇒ MMK 1,358/m2

Partial Working Floor Months Used: T4＝0.0 months // L1＝27、 L2＝25、 N1=0.004、 N2=0.003 (Table 13.4 / P.747) // Skilled Labour Corr. = 2.50 (P.39)

Partial Working Floor Unit Cost＝L1＋L2×T4＋(N1＋N2)×Skilled Labour Coefficient×y＝27＋25×0.0＋(0.004+0.003)×2.5×2,718＝75円 ⇒ MMK 901/m2

Scaffold Netting Months Used: T5＝1.5 months // L1＝50、 L2＝41、 N1=0.013、 N2=0.009 (Table 13.5 / P.748) // Skilled Labour Corr. = 2.50 (P.39)

Scaffold Netting Unit Cost＝L1＋L2×T5＋(N1＋N2)×Skilled Labour Coefficient×y＝50＋41×1.5＋(0.013+0.009)×2.5×2,718＝261円 ⇒ MMK 3,137/m2

Slab Aditional Scaffold: T6＝0.0 months // L1＝15、 L2＝11 (Table 13.6 / P.748)

Slab Aditional Scaffold＝L1＋L2×T6＝15＋11×0.0＝15円 ⇒ MMK 180/m2

Total										16,301,385			

Item: Anti Falling. Obj. Net & Temp. Access

Spec.: Box Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.749～750

Unit Price			Yen Conv.
MMK	USD	JPY	
1,321,584			109,956

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	Falling Object Protection	{L1＋L2×T8＋(N1＋N2)×y}×A	m2	0.00	1.0	0.00	4,868						
	Temporary Access	{L2×T11＋(N1＋N2)×y}×H	m	12.00	1.0	12.00	110,132			1,321,584			

【Notes】

● Estimation Conditions

Condition ① Pipe Scaffold (For Plate Girder or Box Girder)

Condition ② Bridge Area (A)＝2,295.0 m2

Condition ③ Skilled Labour for Bridges (JPY/day) (y)＝2,718円 (MMK 32,667/day), Installation Coefficient (N1) & Removal Coefficient (N2) corrected with Skilled Labour Coefficient

Falling Object Protection Months Used: T8＝0.0 months // L1＝140、 L2＝161、 N1=0.027、 N2=0.012 (Table 13.9 / P.749) // Skilled Labour Corr. = 2.50 (P.39)

Falling Object Protection Unit Cost＝L1＋L2×T8＋(N1＋N2)×Skilled Labour Coefficient×y＝140＋161×0.0＋(0.027+0.012)×2.5×2,718＝405円 ⇒ MMK 4,868/m2

Temporary Access Months Used: T11＝1.5 months // L2＝2,942、 N1=0.407、 N2=0.292 (13-3-2 / P.750) // Skilled Labour Corr. = 2.50 (P.39)

Temporary Access Unit Cost＝L2×T11＋(N1＋N2)×Skilled Labour Coefficient×y＝2,942×1.5＋(0.407+0.292)×2.5×2,718＝9,163円 ⇒ MMK 110,132/m

Total	1,321,584			

Item: In Situ Assembly Works

Spec.: Box Girder　　Unit: 563.200 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
13,915			1,158

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	11.66	2.50	29.15	49,000			1,428,350			G／Dg×1＝563.200／48.3×1＝11.66 days
LBR-15	Skilled Labour for Bridges		day	69.96	2.50	174.90	32,667			5,713,458			G／Dg×6＝563.200／48.3×6＝69.96 days
LBR-3	Unskilled Labour		day	11.66	2.50	29.15	13,500			393,525			G／Dg×1＝563.200／48.3×1＝11.66 days
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	7,535,333			301,413			

【Notes】

● Daily Construction Productivity (Dg) ＝G／{0.020×(G+20)}＝563.2／{0.020×(563.2＋20)}＝48.3 t

Condition ① Box Girder Bridge Type

Condition ② In Situ Assembly Weight (G)＝563.2 t

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										7,836,746			

Item: Erection Works

Spec.: Box Girder　　Unit: 759.816 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.752

Unit Price			Yen Conv.
MMK	USD	JPY	
12,047			1,002

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	13.24	2.50	33.10	49,000			1,621,900			W／Dw×1＝759.816／57.4×1＝13.24 days
LBR-15	Skilled Labour for Bridges		day	79.42	2.50	198.55	32,667			6,486,033			W／Dw×6＝759.816／57.4×6＝79.42 days
LBR-3	Unskilled Labour		day	13.24	2.50	33.10	13,500			446,850			W／Dw×1＝759.816／57.4×1＝13.24 days
SUN-1	Sundry Expenses	On labour costs	%	7.00	1.0	7.00	8,554,783			598,835			

【Notes】

● Daily Construction Productivity (Dw) ＝W／[0.27×a×(n＋11)]＝759.816／[0.27×1.400×(24＋11)]＝57.400 t

Condition ① Truck Crane Erection (Box Girder)

Condition ② Bridge Main Components Total Weight (W)＝759.816 t, Main Girder Weight＝653.777 t, Main Girder Erection Operations (n)＝24

Condition ③ Block Weight Coefficient: Block Weight＝Main Girder Weight／Main Girder Erection Operations＝653.777／24＝27.241 t ⇒ a＝1.4 (Annex Table-1 / P.741)

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										9,153,618			

Item: Bolt Tightening Works

Spec.: Box Girder　　Unit: 43,766 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.752

Unit Price			Yen Conv.
MMK	USD	JPY	
319			27

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	22.91	2.50	57.28	49,000			2,806,720			Q／Dq×1＝43,766／1,910×1＝22.91 days
LBR-15	Skilled Labour for Bridges		day	114.57	2.50	286.43	32,667			9,356,809			Q／Dq×5＝43,766／1,910×5＝114.57 days
LBR-3	Unskilled Labour		day	22.91	2.50	57.28	13,500			773,280			Q／Dq×1＝43,766／1,910×1＝22.91 days
	Torshear High Strengh Bolt		no	43,766.00	1.0	43,766.00							Calculated in Separated
SUN-1	Sundry Expenses	On labour costs	%	8.00	1.0	8.00	12,936,809			1,034,945			

【Notes】

● Daily Construction Productivity (Dq) ＝Q／{0.52×Q／1000＋0.19}＝43,766／(0.52×43,766／1,000＋0.19)＝1,910 no

Condition ① Bolt Tightening Quantity (Q)＝43,766 no

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total										13,971,754			

Item: Erection Equipments Cost

Spec.: Box Girder　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.753

Unit Price			Yen Conv.
MMK	USD	JPY	
111,079,114			9,241,782

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-17	Crawler Crane	200t	total days	24.90	1.35	33.62	2,064,160			69,397,059			Working Days Corr. = 1.35 (P.13)
ERN-20	Rough Terrain Crane	25t	total days	3.70	1.35	5.00	244,440			1,222,200			Working Days Corr. = 1.35 (P.13)
STD-1	Erection Tools	Assembling & Bolt Tightening Tools	total days	109.80	1.35	148.23	113,822			16,871,835			Working Days Corr. = 1.35 (P.13)
ERN-36	Generator	37/45kVA	total days	109.80	1.35	148.23	74,418			11,030,980			Working Days Corr. = 1.35 (P.13)
ERN-45	Temporary Tightening Bolt	M22×90	100×total days	7,513.34	1.35	10,143.01	577			5,852,517			Working Days Corr. = 1.35 (P.13)
ERN-46	Drift Pin	Φ24.5×150	100×total days	3,756.67	1.35	5,071.50	1,322			6,704,523			Working Days Corr. = 1.35 (P.13)

【Notes】

● Construction Tasks Duration

A: Erection Time＝W／Dw＝759.816／57.4＝13.2 days

B: In Situ Assembly Time＝G／Dg＝563.200／48.3＝11.7 days

C: Bearing Installation Time＝N／Dn＝4／3.8＋4／1.5＝3.7 days

D: Bridge Anti-Falling System Install Time＝K／Dk＝0 days

E: Bent Install & Removal Time＝T／Dt＝147.600／6.8＝21.7 days

F: Cable Crane Install & Removal Time＝0 days

G: Cable Erection Install & Removal Time＝0 days

H: Bolt Tightening Time＝Q／Dq＝43,766／1,910＝22.9 days

I: Short Distance Transport＝0 days

● Erection Equipment Total Days

Main Crane Total Days＝A＋B＝13.2＋11.7＝24.90 total days

Auxiliar Crane Total Days＝C＋D＋I＝3.7＋0.0＋0.0＝3.70 total days

Erection Tools Total Days＝(A＋B＋C＋D＋E＋(F or G)＋H)×1.5＝(13.2＋11.7＋3.7＋0.0＋21.7＋0.0＋0.0＋22.9)×1.5＝109.80 total days

Generator Total Days＝(A＋B＋C＋E＋(F or G)＋H)×1.5＝(13.2＋11.7＋3.7＋21.7＋0.0＋0.0＋22.9)×1.5＝109.80 total days

Temporary Tightening Bolt Total Days＝(A＋B＋C＋(F or G)＋H)×1.5＝(13.2＋11.7＋3.7＋0.0＋0.0＋22.9)×1.5＝77.25 total days ⇒ 77.25×9,726／100＝7,513.34 100×total days

Temporary Tightening Bolt Quantity＝Main Bolt Quantity×1/3×2/3＝43,766×1/3×2/3＝9,726 no (Table 3.3 / P. 738)

Drift Pin Total Days＝(A＋B＋C＋(F or G)＋H)×1.5＝(13.2＋11.7＋3.7＋0.0＋0.0＋22.9)×1.5＝77.25 total days ⇒ 77.25×4,863／100＝3,756.67 100×total days

Drift Pin Quantity＝Main Bolt Quantity×1/3×1/3＝43,766×1/3×1/3＝4,863 no (Table 3.3 / P. 738)

Total	111,079,114			

Item: Night Time Construction (Allowance)

Spec.: Box Girder　　Unit: 759.816 t

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P<22>

Unit Price			Yen Conv.
MMK	USD	JPY	
29,183			2,428

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Plate Girder Erection】												
LBR-14	Foreman for Bridges		day	33.10	1.00	33.10	49,000			1,621,900			
LBR-15	Skilled Labour for Bridges		day	198.55	1.00	198.55	32,667			6,486,033			
LBR-3	Unskilled Labour		day	33.10	1.00	33.10	13,500			446,850			
LBR-6	Operator		day	33.62	1.00	33.62	20,300			682,486			
	【Bolt Tightening Works】												
LBR-14	Foreman for Bridges		day	57.28	1.00	57.28	49,000			2,806,720			
LBR-15	Skilled Labour for Bridges		day	286.43	1.00	286.43	32,667			9,356,809			
LBR-3	Unskilled Labour		day	57.28	1.00	57.28	13,500			773,280			

【Notes】

● Night Shift Allowance: 100%

Total										22,174,078			

Item: Base Secondary Treatment

Spec.: Power Tool Cleaning / In Situ　　Unit: 100 m2

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4

Unit Price			Yen Conv.
MMK	USD	JPY	
1,327			110

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-16	Coating Applicator for Bridges		day	2.30	2.50	5.75	22,400			128,800			Skilled Labour Corr. = 2.50 (P.39)
SUN-1	Sundry Expenses	On labour costs	%	3.00	1.0	3.00	128,800			3,864			
Total										132,664			

Item: In Situ Coating

Spec.: F-11 (Outward Surface) Unit: 100 m2

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4

Unit Price			Yen Conv.
MMK	USD	JPY	
6,647		2,318	2,871

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Painting Material】												
ITEM-173	Base Secondary Treatment	Power Tool Cleaning / In Situ	m2	100.00	1.0	100.00	1,327			132,700			In Situ Coating
MAT-7047	Mist Coat	Modified Epoxy Resin Paint	kg	13.00	1.0	13.00			1,010			13,130	In Situ Coating
MAT-7048	Inner Layer / 2nd & 3rd Film	Ultra Thick Modified Epoxy Resin Paint	kg	100.00	1.0	100.00			1,270			127,000	In Situ Coating (x2)
MAT-7045	Intermediate Layer	Fluorocarbon Resin Intermediate Paint	kg	14.00	1.0	14.00			1,180			16,520	In Situ Coating (Pastel Paint)
MAT-7046	Upper Layer	Fluorocarbon Resin Finish Paint	kg	12.00	1.0	12.00			3,910			46,920	In Situ Coating (Pastel Paint)
	【Thinner】												
MAT-7053	Mist Coat	Modified Epoxy Resin Paint Thinner	ℓ	5.29	1.0	5.29			355			1,878	Thinner＝11.76×45%＝5.29ℓ(※)
MAT-7050	Inner Layer / 2nd & 3rd Film	Epoxy Resin Paint Primer Thinner	ℓ	11.76	1.0	11.76			355			4,175	Thinner＝13.0×10%／0.85＝11.76ℓ
MAT-7051	Intermediate Layer	Fluorocarbon Resin Intermediate Paint Thinner	ℓ	1.65	1.0	1.65			355			586	Thinner＝14.0×10%／0.85＝1.65ℓ
MAT-7052	Upper Layer	Fluorocarbon Resin Finish Paint Thinner	ℓ	1.41	1.0	1.41			390			550	Thinner＝12.0×10%／0.85＝1.41ℓ
	【Labour & Miscellaneous】												
LBR-16	Coating Applicator for Bridges		day	9.50	2.50	23.75	22,400			532,000			Skilled Labour Corr. = 2.50 (P.39)
SUN-2	Sundry Expenses	On material costs	%	10.00	1.0	10.00			210,759			21,076	

【Notes】

- Thinner quantities are equal to 10% of layer paint mass (Table 3.2 / P. Ⅳ-7-②-2)
- Thinner specific gravity is 0.85 t/m3 (P. Ⅳ-7-②-2)
- Mist coat thinner quantity is equal 45% of the thinner quantity used in the next layer (P. Ⅳ-7-②-2)(※)
- In Situ Coating: Labour prod. according to MOC Cost Estimate Standard for Civil Works/1992 P. 654

  Coating Applicator for Bridges: 5 layers×1.9×(1＋0.0)×(1＋0.0)＝9.5 days (Table 4.2～4.3 / P. 654)

Total										664,700		231,835	

Item: In Situ Coating

Spec.: F-11 (Extra Protection Layer) Unit: 100 m2

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4

Unit Price			Yen Conv.
MMK	USD	JPY	
8,775		3,761	4,491

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Painting Material】												
ITEM-173	Base Secondary Treatment	Power Tool Cleaning / In Situ	m2	100.00	1.0	100.00	1,327			132,700			In Situ Coating
MAT-7047	Mist Coat	Modified Epoxy Resin Paint	kg	13.00	1.0	13.00			1,010			13,130	In Situ Coating
MAT-7048	Inner Layer / 2nd & 3rd Film	Ultra Thick Modified Epoxy Resin Paint	kg	100.00	1.0	100.00			1,270			127,000	In Situ Coating (x2)
MAT-7048	Inner Layer / 2nd & 3rd Film (Extra Layer)	Ultra Thick Modified Epoxy Resin Paint	kg	100.00	1.0	100.00			1,270			127,000	In Situ Coating (x2)
MAT-7045	Intermediate Layer	Fluorocarbon Resin Intermediate Paint	kg	14.00	1.0	14.00			1,180			16,520	In Situ Coating (Pastel Paint)
MAT-7046	Upper Layer	Fluorocarbon Resin Finish Paint	kg	12.00	1.0	12.00			3,910			46,920	In Situ Coating (Pastel Paint)
	【Thinner】												
MAT-7053	Mist Coat	Modified Epoxy Resin Paint Thinner	ℓ	5.29	1.0	5.29			355			1,878	Thinner＝11.76×45%＝5.29ℓ(※)
MAT-7050	Inner Layer / 2nd & 3rd Film	Epoxy Resin Paint Primer Thinner	ℓ	11.76	1.0	11.76			355			4,175	Thinner＝100.0×10%／0.85＝11.76ℓ
MAT-7050	Inner Layer / 2nd & 3rd Film (Extra Layer)	Epoxy Resin Paint Primer Thinner	ℓ	11.76	1.0	11.76			355			4,175	Thinner＝100.0×10%／0.85＝11.76ℓ
MAT-7051	Intermediate Layer	Fluorocarbon Resin Intermediate Paint Thinner	ℓ	1.65	1.0	1.65			355			586	Thinner＝14.0×10%／0.85＝1.65ℓ
MAT-7052	Upper Layer	Fluorocarbon Resin Finish Paint Thinner	ℓ	1.41	1.0	1.41			390			550	Thinner＝12.0×10%／0.85＝1.41ℓ
	【Labour & Miscellaneous】												
LBR-16	Coating Applicator for Bridges		day	13.30	2.50	33.25	22,400			744,800			Skilled Labour Corr. = 2.50 (P.39)
SUN-2	Sundry Expenses	On material costs	%	10.00	1.0	10.00			341,934			34,193	

【Notes】

- Thinner quantities are equal to 10% of layer paint mass (Table 3.2 / P. Ⅳ-7-②-2)
- Thinner specific gravity is 0.85 t/m3 (P. Ⅳ-7-②-2)
- Mist coat thinner quantity is equal 45% of the thinner quantity used in the next layer (P. Ⅳ-7-②-2)(※)
- In Situ Coating: Labour prod. according to MOC Cost Estimate Standard for Civil Works/1992 P. 654

  Coating Applicator for Bridges: 7 layers×1.9×(1＋0.0)×(1＋0.0)＝13.3 days (Table 4.2～4.3 / P. 654)

Total										877,500		376,127	

Item: In Situ Coating

Spec.: F-12 (Inward Surface) Unit: 100 m2

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4

Unit Price			Yen Conv.
MMK	USD	JPY	
6,116		1,608	2,117

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Painting Material】												
ITEM-173	Base Secondary Treatment	Power Tool Cleaning / In Situ	m2	100.00	1.0	100.00	1,327			132,700			In Situ Coating
MAT-7047	Mist Coat	Modified Epoxy Resin Paint	kg	13.00	1.0	13.00			1,010			13,130	In Situ Coating
MAT-7048	Inner Layer / 2nd & 3rd Film	Ultra Thick Modified Epoxy Resin Paint	kg	100.00	1.0	100.00			1,270			127,000	In Situ Coating (x2)
	【Thinner】												
MAT-7053	Mist Coat	Modified Epoxy Resin Paint Thinner	ℓ	5.29	1.0	5.29			355			1,878	Thinner＝11.76×45%＝5.29ℓ(※)
MAT-7050	Inner Layer / 2nd & 3rd Film	Epoxy Resin Paint Primer Thinner	ℓ	11.76	1.0	11.76			355			4,175	Thinner＝100.0×10%／0.85＝11.76ℓ
	【Labour & Miscellaneous】												
LBR-16	Coating Applicator for Bridges		day	8.55	2.50	21.38	22,400			478,912			Skilled Labour Corr. = 2.50 (P.39)
SUN-2	Sundry Expenses	On material costs	%	10.00	1.0	10.00			146,183			14,618	

【Notes】

- Thinner quantities are equal to 10% of layer paint mass (Table 3.2 / P. Ⅳ-7-②-2)
- Thinner specific gravity is 0.85 t/m3 (P. Ⅳ-7-②-2)
- Mist coat thinner quantity is equal 45% of the thinner quantity used in the next layer (P. Ⅳ-7-②-2)(※)
- In Situ Coating: Labour prod. according to MOC Cost Estimate Standard for Civil Works/1992 P. 654

  Coating Applicator for Bridges: 3 layer×1.9×(1＋0.0)×(1＋0.5)＝8.55 days (Table 4.2～4.3 / P. 654)

Total										611,612		160,801	

Item: In Situ Coating

Spec.: Zinc Rich Paint (In Situ Coating Portion) Unit: 100 m2

Source:: MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-②-4

Unit Price			Yen Conv.
MMK	USD	JPY	
2,391		650	849

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Painting Material】												
ITEM-173	Base Secondary Treatment	Power Tool Cleaning / In Situ	m2	100.00	1.0	100.00	1,327			132,700			In Situ Coating
MAT-7044	Inner Layer / 1st Film	Zinc Rich Paint	kg	60.00	1.0	60.00			940			56,400	In Situ Coating
	【Thinner】												
MAT-7049	Inner Layer / 1st Film	Zinc Rich Paint Thinner	ℓ	7.06	1.0	7.06			375			2,648	Thinner＝60.0×10%／0.85＝7.06ℓ
	【Labour & Miscellaneous】												
LBR-16	Coating Applicator for Bridges		day	1.90	2.50	4.75	22,400			106,400			Skilled Labour Corr. = 2.50 (P.39)
SUN-2	Sundry Expenses	On material costs	%	10.00	1.0	10.00			59,048			5,905	

【Notes】

- Thinner quantities are equal to 10% of layer paint mass (Table 3.2 / P. Ⅳ-7-②-2)
- Thinner specific gravity is 0.85 t/m3 (P. Ⅳ-7-②-2)
- In Situ Coating: Labour prod. according to MOC Cost Estimate Standard for Civil Works/1992 P. 654

  Coating Applicator for Bridges: 1 layer×1.9×(1＋0.0)×(1＋0.0)＝1.9 days (Table 4.2～4.3 / P. 654)

Total										239,100		64,953	

Item: Elastomeric Bearing Pad

Spec.: 134×470×470 Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
78,957		1,175,000	1,181,569

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.14	2.50	0.35	49,000			17,150			1／Dn×1＝1／7.3×1＝0.14 days
LBR-15	Skilled Labour for Bridges		day	0.68	2.50	1.70	32,667			55,534			1／Dn×5＝1／7.3×5＝0.68 days
LBR-3	Unskilled Labour		day	0.14	2.50	0.35	13,500			4,725			1／Dn×1＝1／7.3×1＝0.14 days
MAT-2011	Elastomeric Bearing Pad	134×470×470	no	1.00	1.0	1.00			1,175,000			1,175,000	
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	77,409			1,548			

【Notes】

● Daily Construction Productivity (Dn) ＝1／(0.095×W＋0.093)＝1／(0.095×0.471＋0.093)＝7.3 no

Condition ① Bearing Unit Weight (W)＝0.471 t

Condition ② Standard Rubber Bearing Type

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total				78,957		1,175,000	

Item: Elastomeric Bearing Pad

Spec.: 170×670×670 Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
261,297		2,750,000	2,771,740

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.45	2.50	1.13	49,000			55,370			1／Dn×1＝1／2.2×1＝0.45 days
LBR-15	Skilled Labour for Bridges		day	2.27	2.50	5.68	32,667			185,549			1／Dn×5＝1／2.2×5＝2.27 days
LBR-3	Unskilled Labour		day	0.45	2.50	1.13	13,500			15,255			1／Dn×1＝1／2.2×1＝0.45 days
MAT-2012	Elastomeric Bearing Pad	170×670×670	no	1.00	1.0	1.00			2,750,000			2,750,000	
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	256,174			5,123			

【Notes】

● Daily Construction Productivity (Dn) ＝1／(0.124×W+0.296)＝1／(0.124×1.261+0.296)＝2.2 no

Condition ① Bearing Unit Weight (W)＝1.261 t

Condition ② Special Elastomeric Bearing Pad

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total	261,297		2,750,000	

Item: Elastomeric Bearing Pad

Spec.: 219×770×720 Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
151,395		3,900,000	3,912,596

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.26	2.50	0.65	49,000			31,850			1／Dn×1＝1／3.8×1＝0.26 days
LBR-15	Skilled Labour for Bridges		day	1.32	2.50	3.30	32,667			107,801			1／Dn×5＝1／3.8×5＝1.32 days
LBR-3	Unskilled Labour		day	0.26	2.50	0.65	13,500			8,775			1／Dn×1＝1／3.8×1＝0.26 days
MAT-2013	Elastomeric Bearing Pad	219×770×720	no	1.00	1.0	1.00			3,900,000			3,900,000	
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	148,426			2,969			

【Notes】

● Daily Construction Productivity (Dn) ＝1／(0.095×W＋0.093)＝1／(0.095×1.797＋0.093)＝3.8 no

Condition ① Bearing Unit Weight (W)＝1.797 t

Condition ② Standard Rubber Bearing Type

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total				151,395		3,900,000	

Item: Elastomeric Bearing Pad

Spec.: 314×1070×1070 Unit: 1 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.751

Unit Price			Yen Conv.
MMK	USD	JPY	
384,658		11,561,000	11,593,004

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	0.67	2.50	1.68	49,000			82,320			1／Dn×1＝1／1.5×1＝0.67 days
LBR-15	Skilled Labour for Bridges		day	3.33	2.50	8.33	32,667			272,116			1／Dn×5＝1／1.5×5＝3.33 days
LBR-3	Unskilled Labour		day	0.67	2.50	1.68	13,500			22,680			1／Dn×1＝1／1.5×1＝0.67 days
MAT-2014	Elastomeric Bearing Pad	314×1070×1070	no	1.00	1.0	1.00			11,561,000			11,561,000	
SUN-1	Sundry Expenses	On labour costs	%	2.00	1.0	2.00	377,116			7,542			

【Notes】

● Daily Construction Productivity (Dn) ＝1／(0.095×W＋0.093)＝1／(0.095×6.202＋0.093)＝1.5 no

Condition ① Bearing Unit Weight (W)＝6.202 t

Condition ② Standard Rubber Bearing Type

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 (P.39)

Total			384,658		11,561,000	

Item: Elastomeric Bearing Pad				
Spec.: 92×470×520	Unit: 10	no		
Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.807				

Unit Price			Yen Conv.
MMK	USD	JPY	
112,066		191,000	200,324

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.11	2.50	2.78	49,000			136,220			10／N×1＝10／9×1＝1.11 days
LBR-15	Skilled Labour for Bridges		day	2.22	2.50	5.55	32,667			181,302			10／N×2＝10／9×2＝2.22 days
LBR-3	Unskilled Labour		day	2.22	2.50	5.55	13,500			74,925			10／N×2＝10／9×2＝2.22 days
MAT-2015	Elastomeric Bearing Pad	92×470×520	no	10.00	1.0	10.00			191,000			1,910,000	
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	0.25	1.0	0.25	2,850,050			712,513			
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	392,447			15,698			

【Notes】

● Daily Construction Productivity (N) ＝9 no （Table 6.2 / P.797）

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 （P.39）

Total				1,120,658		1,910,000	

Item: Elastomeric Bearing Pad

Spec.: 112×520×520 Unit: 10 no

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.807

Unit Price			Yen Conv.
MMK	USD	JPY	
112,066		254,000	263,324

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.11	2.50	2.78	49,000			136,220			10／N×1＝10／9×1＝1.11 days
LBR-15	Skilled Labour for Bridges		day	2.22	2.50	5.55	32,667			181,302			10／N×2＝10／9×2＝2.22 days
LBR-3	Unskilled Labour		day	2.22	2.50	5.55	13,500			74,925			10／N×2＝10／9×2＝2.22 days
MAT-2016	Elastomeric Bearing Pad	112×520×520	no	10.00	1.0	10.00			254,000			2,540,000	
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	0.25	1.0	0.25	2,850,050			712,513			
SUN-1	Sundry Expenses	On labour costs	%	4.00	1.0	4.00	392,447			15,698			

【Notes】

● Daily Construction Productivity (N) ＝9 no （Table 6.2 / P.797）

● JICA Correction Coefficient: Skilled Labour Corr. = 2.50 （P.39）

Total				1,120,658		2,540,000	

Item: Anchor Bar Works

Spec.:

Unit: 4,319.4 kg

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
1,796		3,701	3,850

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Material Cost】												
MAT-2017	Anchor Bar System	(F) Φ60×1220	no	12.00	1.0	12.00			83,200			998,400	Unit Weight = 27.1 kg
MAT-2018	Anchor Bar System	(M) Φ60×1220	no	24.00	1.0	24.00			125,100			3,002,400	Unit Weight = 27.1 kg
MAT-2019	Anchor Bar System	(M) Φ65×1320	no	6.00	1.0	6.00			151,300			907,800	Unit Weight = 34.3 kg
MAT-2020	Anchor Bar System	(F) Φ75×1520	no	18.00	1.0	18.00			181,200			3,261,600	Unit Weight = 52.7 kg
MAT-2021	Anchor Bar System	(F) Φ85×1720	no	6.00	1.0	6.00			268,000			1,608,000	Unit Weight = 76.5 kg
MAT-2022	Anchor Bar System	(F) Φ90×1820	no	12.00	1.0	12.00			310,200			3,722,400	Unit Weight = 90.8 kg
MAT-2023	Anchor Bar System	(F) Φ95×1920	no	6.00	1.0	6.00			368,700			2,212,200	Unit Weight = 106.8 kg
MAT-2024	Anti Corrosion Protection	200×200×20	no	30.00	1.0	30.00			2,100			63,000	
MAT-2025	Anti Corrosion Protection	200×300×20	no	54.00	1.0	54.00			3,200			172,800	
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.58	1.0	0.58	279,905		62,640	162,345		36,331	
ITEM-154	Non-shrink Grout	Premix Cement Type	m3	2.50	1.0	2.50	2,850,050			7,125,125			
	【Instalation Cost】												
ITEM-185	Anchor Bar Installation	Vertical Installation／55＜D≦70	no	42.00	1.0	42.00	4,058			170,436			Material Costs Not Included
ITEM-186	Anchor Bar Installation	Vertical Installation／70＜D≦85	no	24.00	1.0	24.00	5,859			140,616			Material Costs Not Included
ITEM-187	Anchor Bar Installation	Vertical Installation／D＞85	no	18.00	1.0	18.00	8,785			158,130			Material Costs Not Included
Total										7,756,652		15,984,931	

Item: Anchor Bar Installation

Spec.: Vertical Installation／55＜D≦70　　Unit: 100 no

Source:: Bridge Erection Works Cost Estimation/2014 P.1029

Unit Price			Yen Conv.
MMK	USD	JPY	
4,058			338

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	3.85	1.50	5.78	24,300			140,454			100／D×1＝100／26×1＝3.85 days
LBR-2	Skilled Labour		day	7.69	1.50	11.54	16,200			186,948			100／D×2＝100／26×2＝7.69 days
LBR-3	Unskilled Labour		day	3.85	1.50	5.78	13,500			78,030			100／D×1＝100／26×1＝3.85 days
	Anchor Bar Material Cost		no	100.00	1.0	100.00							Calculated Separately
	Sealing Material		kg	0.00	1.0	0.00							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	0.10	1.0	0.10	405,432			405			

【Notes】

● Daily Construction Productivity (D) ＝26 no (Table 4-7-12 / P.1023)

Condition ① Anchor Bar Diameter (mm): More Than 55 And Less Or Equal 70

Condition ② Vertical Installation

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total	405,837			

Item: Anchor Bar Installation

Spec.: Vertical Installation／70＜D≦85　　Unit: 100 no

Source:: Bridge Erection Works Cost Estimation/2014 P.1029

Unit Price			Yen Conv.
MMK	USD	JPY	
5,859			487

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	5.56	1.50	8.34	24,300			202,662			100／D×1＝100／18×1＝5.56 days
LBR-2	Skilled Labour		day	11.11	1.50	16.67	16,200			270,054			100／D×2＝100／18×2＝11.11 days
LBR-3	Unskilled Labour		day	5.56	1.50	8.34	13,500			112,590			100／D×1＝100／18×1＝5.56 days
	Anchor Bar Material Cost		no	100.00	1.0	100.00							Calculated Separately
	Sealing Material		kg	0.00	1.0	0.00							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	0.10	1.0	0.10	585,306			585			

【Notes】

● Daily Construction Productivity (D) ＝18 no (Table 4-7-12 / P.1023)

Condition ① Anchor Bar Diameter (mm): More Than 70 And Less Or Equal 85

Condition ② Vertical Installation

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total										585,891			

Item: Anchor Bar Installation

Spec.: Vertical Installation／D＞85　　Unit: 100 no

Source:: Bridge Erection Works Cost Estimation/2014 P.1029

Unit Price			Yen Conv.
MMK	USD	JPY	
8,785			731

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	8.33	1.50	12.50	24,300			303,750			100／D×1＝100／12×1＝8.33 days
LBR-2	Skilled Labour		day	16.67	1.50	25.01	16,200			405,162			100／D×2＝100／12×2＝16.67 days
LBR-3	Unskilled Labour		day	8.33	1.50	12.50	13,500			168,750			100／D×1＝100／12×1＝8.33 days
	Anchor Bar Material Cost		no	100.00	1.0	100.00							Calculated Separately
	Sealing Material		kg	0.00	1.0	0.00							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	0.10	1.0	0.10	877,662			878			

【Notes】

● Daily Construction Productivity (D) ＝12 no （Table 4-7-12 / P.1023）

Condition ① Anchor Bar Diameter (mm): More Than 85

Condition ② Vertical Installation

● JICA Correction Coefficient: Simple Labour Corr. = 1.50 (P.39)

Total										878,540			

Item: Expansion Joint Installation Works

Spec.: Joint Type 80mm　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.862

Unit Price			Yen Conv.
MMK	USD	JPY	
41,331		300,670	304,109

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.00	2.50	2.50	13,500			33,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-2026	Expansion Joint (Metallic Type)	80mm	m	10.00	1.0	10.00			300,670			3,006,700	
ERN-19	Rough Terrain Crane	16t	day	0.50	1.0	0.50	190,120			95,060			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										413,310		3,006,700	

Item: Expansion Joint Installation Works

Spec.: Joint Type 110mm　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.862

Unit Price			Yen Conv.
MMK	USD	JPY	
41,331		396,426	399,865

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.00	2.50	2.50	13,500			33,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-2027	Expansion Joint (Metallic Type)	110mm	m	10.00	1.0	10.00			396,426			3,964,260	
ERN-19	Rough Terrain Crane	16t	day	0.50	1.0	0.50	190,120			95,060			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										413,310		3,964,260	

Item: Expansion Joint Installation Works

Spec.: Joint Type 160mm　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.862

Unit Price			Yen Conv.
MMK	USD	JPY	
41,331		596,252	599,691

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.00	2.50	2.50	13,500			33,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-2028	Expansion Joint (Metallic Type)	160mm	m	10.00	1.0	10.00			596,252			5,962,520	
ERN-19	Rough Terrain Crane	16t	day	0.50	1.0	0.50	190,120			95,060			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										413,310		5,962,520	

Item: Expansion Joint Installation Works

Spec.: Joint Type 230mm　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.862

Unit Price			Yen Conv.
MMK	USD	JPY	
41,331		831,478	834,917

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.00	2.50	2.50	13,500			33,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-2029	Expansion Joint (Metallic Type)	230mm	m	10.00	1.0	10.00			831,478			8,314,780	
ERN-19	Rough Terrain Crane	16t	day	0.50	1.0	0.50	190,120			95,060			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										413,310		8,314,780	

Item-192

Item: Expansion Joint Installation Works

Spec.: Joint Type 320mm　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.862

Unit Price			Yen Conv.
MMK	USD	JPY	
41,331		1,040,739	1,044,178

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-14	Foreman for Bridges		day	1.00	2.50	2.50	49,000			122,500			Skilled Labour Corr. = 2.50 (P.39)
LBR-2	Skilled Labour		day	4.00	2.50	10.00	16,200			162,000			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	1.00	2.50	2.50	13,500			33,750			Skilled Labour Corr. = 2.50 (P.39)
MAT-2030	Expansion Joint (Metallic Type)	320mm	m	10.00	1.0	10.00			1,040,739			10,407,390	
ERN-19	Rough Terrain Crane	16t	day	0.50	1.0	0.50	190,120			95,060			
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										413,310		10,407,390	

Item: Deck Waterproof Works

Spec.: Unit: 100 m2

Source:: MOC Cost Estimate Standard for Civil Works/1999 P.615

Unit Price			Yen Conv.
MMK	USD	JPY	
46,158			3,840

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.50	2.50	1.25	24,300			30,375			Skilled Labour Corr. = 2.50 (P.39)
LBR-13	Waterproofing Applicator		day	1.20	2.50	3.00	20,300			60,900			Skilled Labour Corr. = 2.50 (P.39)
LBR-3	Unskilled Labour		day	0.70	2.50	1.75	13,500			23,625			Skilled Labour Corr. = 2.50 (P.39)
MAT-7003	Asphalt Waterproof Sheet		m2	100.00	1.0	100.00	44,952			4,495,200			
SUN-1	Sundry Expenses	On labour costs	%	5.00	1.0	5.00	114,900			5,745			
Total										4,615,845			

Item: Drainage Material

Spec.: Subtructure　　Unit: 0.912 t

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
48,082,966		599,452	4,599,955

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Fabrication Components】												
QTN-11	Drainage Material (Substructure)	Steel Fabricated Components	t	0.912	1.0	0.912			451,585			411,846	
	【Assembled Components】												
ITEM-195	Drainage Material (Substructure)	Assembled Components	L.Sum	1.00	1.0	1.00	43,851,665		134,854	43,851,665		134,854	
Total										43,851,665		546,700	

Item: Drainage Material (Substructure)

Spec.: Assembled Components　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
43,851,665		134,854	3,783,313

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bolt, etc.】												
MAT-2002	Anchor Bolt	M16×100	no	608.00	1.0	608.00			205			124,640	
MAT-2003	Hexagonal Bolt	M12×35	no	608.00	1.0	608.00			9.4			5,715	
MAT-2006	Washer	M12	no	1,216.00	1.0	1,216.00			3.7			4,499	
	【PVC Pipe】												
MAT-7007	PVC Pipe	200mm	m	178.00	1.0	178.00	35,156			6,257,768			
	【PVC Special Fittings】												
MAT-7025	PVC Pipe・Special Fittings	L1	no	24.00	1.0	24.00	827,158			19,851,792			
MAT-7026	PVC Pipe・Special Fittings	L2	no	6.00	1.0	6.00	942,954			5,657,724			
MAT-7027	PVC Pipe・Special Fittings	L3	no	9.00	1.0	9.00	1,342,709			12,084,381			
Total										43,851,665		134,854	

Item: Drainage Material

Spec.: PC Girder　　Unit: 6.194 t

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
14,627,084		640,565	1,857,539

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Fabrication Components】												
QTN-11	Drainage Material (PC Girder)	Steel Fabricated Components	t	6.194	1.0	6.194			451,585			2,797,117	
	【Assembled Components】												
ITEM-197	Drainage Material (PC Girder)	Assembled Components	L.Sum	1.00	1.0	1.00	90,600,161		1,170,545	90,600,161		1,170,545	
Total										90,600,161		3,967,662	

Item: Drainage Material (PC Girder)

Spec.: Assembled Components　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
90,600,161		1,170,545	8,708,478

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bolt, etc.】												
MAT-2001	Anchor Bolt	M12×100	no	174.00	1.0	174.00			84			14,616	
MAT-2002	Anchor Bolt	M16×100	no	34.00	1.0	34.00			205			6,970	
MAT-2003	Hexagonal Bolt	M12×35	no	17.00	1.0	17.00			9.4			160	
MAT-2004	Hexagonal Bolt	M12×40	no	174.00	1.0	174.00			10.3			1,792	
MAT-2006	Washer	M12	no	191.00	1.0	191.00			3.7			707	
	【PVC Pipe】												
MAT-7007	PVC Pipe	200mm	m	319.70	1.0	319.70	35,156			11,239,373			
	【PVC Special Fittings】												
MAT-7010	PVC Pipe・Special Fittings	T1	no	7.00	1.0	7.00	1,130,141			7,910,987			
MAT-7011	PVC Pipe・Special Fittings	T2	no	18.00	1.0	18.00	1,107,938			19,942,884			
MAT-7012	PVC Pipe・Special Fittings	T3	no	3.00	1.0	3.00	966,747			2,900,241			
MAT-7013	PVC Pipe・Special Fittings	T4	no	10.00	1.0	10.00	827,158			8,271,580			
MAT-7014	PVC Pipe・Special Fittings	T5	no	7.00	1.0	7.00	1,720,260			12,041,820			
MAT-7028	PVC Pipe・Special Fittings	EX	no	28.00	1.0	28.00	643,029			18,004,812			
MAT-7029	PVC Pipe・Special Fittings	EX-S	no	16.00	1.0	16.00	643,029			10,288,464			
MAT-7030	Slab Drain	Type-2 / Flexible Tube 1.5m	no	60.00	1.0	60.00			19,105			1,146,300	
Total										90,600,161		1,170,545	

Item: Drainage Material

Spec.: Plate Girder　　Unit: 2.958 t

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
14,429,810		534,554	1,735,115

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Fabrication Components】												
QTN-11	Drainage Material (Plate Girder)	Steel Fabricated Components	t	2.958	1.0	2.958			451,585			1,335,788	
	【Assembled Components】												
ITEM-199	Drainage Material (Plate Girder)	Assembled Components	L.Sum	1.00	1.0	1.00	42,683,377		245,424	42,683,377		245,424	
Total										42,683,377		1,581,212	

Item: Drainage Material (Plate Girder)

Spec.: Assembled Components　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
42,683,377		245,424	3,796,681

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bolt, etc.】												
MAT-2004	Hexagonal Bolt	M12×40	no	888.00	1.0	888.00			10.3			9,146	
MAT-2005	Hexagonal Bolt	M12×45	no	24.00	1.0	24.00			11.2			269	
MAT-2006	Washer	M12	no	1,824.00	1.0	1,824.00			3.7			6,749	
	【PVC Pipe】												
MAT-7007	PVC Pipe	200mm	m	165.80	1.0	165.80	35,156			5,828,865			
	【PVC Special Fittings】												
MAT-7021	PVC Pipe・Special Fittings	T17	no	4.00	1.0	4.00	896,959			3,587,836			
MAT-7022	PVC Pipe・Special Fittings	T18	no	12.00	1.0	12.00	1,177,739			14,132,868			
MAT-7023	PVC Pipe・Special Fittings	T19	no	4.00	1.0	4.00	966,747			3,866,988			
MAT-7024	PVC Pipe・Special Fittings	T20	no	2.00	1.0	2.00	1,203,120			2,406,240			
MAT-7028	PVC Pipe・Special Fittings	EX	no	14.00	1.0	14.00	643,029			9,002,406			
MAT-7029	PVC Pipe・Special Fittings	EX-S	no	6.00	1.0	6.00	643,029			3,858,174			
MAT-7030	Slab Drain	Type-2 / Flexible Tube 1.5m	no	12.00	1.0	12.00			19,105			229,260	
Total										42,683,377		245,424	

Item: Drainage Material

Spec.: Box Girder　　Unit: 2.663 t

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
18,977,294		556,932	2,135,843

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Fabrication Components】												
QTN-12	Drainage Material (Box Girder)	Steel Fabricated Components	t	2.663	1.0	2.663			494,348			1,316,449	
	【Assembled Components】												
ITEM-201	Drainage Material (Box Girder)	Assembled Components	L.Sum	1.00	1.0	1.00	50,536,534		166,660	50,536,534		166,660	
Total										50,536,534		1,483,109	

Item: Drainage Material (Box Girder)

Spec.: Assembled Components　　Unit: 1 L.Sum

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
50,536,534		166,660	4,371,300

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Bolt, etc.】												
MAT-2004	Hexagonal Bolt	M12×40	no	764.00	1.0	764.00			10.3			7,869	
MAT-2005	Hexagonal Bolt	M12×45	no	16.00	1.0	16.00			11.2			179	
MAT-2006	Washer	M12	no	1,560.00	1.0	1,560.00			3.7			5,772	
	【PVC Pipe】												
MAT-7007	PVC Pipe	200mm	m	142.20	1.0	142.20	35,156			4,999,183			
	【PVC Special Fittings】												
MAT-7015	PVC Pipe・Special Fittings	T11	no	17.00	1.0	17.00	755,768			12,848,056			
MAT-7016	PVC Pipe・Special Fittings	T12	no	4.00	1.0	4.00	873,153			3,492,612			
MAT-7017	PVC Pipe・Special Fittings	T13	no	11.00	1.0	11.00	1,038,137			11,419,507			
MAT-7018	PVC Pipe・Special Fittings	T14	no	1.00	1.0	1.00	1,461,683			1,461,683			
MAT-7019	PVC Pipe・Special Fittings	T15	no	1.00	1.0	1.00	1,764,680			1,764,680			
MAT-7020	PVC Pipe・Special Fittings	T16	no	1.00	1.0	1.00	1,366,515			1,366,515			
MAT-7023	PVC Pipe・Special Fittings	T19	no	1.00	1.0	1.00	966,747			966,747			
MAT-7028	PVC Pipe・Special Fittings	EX	no	15.00	1.0	15.00	643,029			9,645,435			
MAT-7029	PVC Pipe・Special Fittings	EX-S	no	4.00	1.0	4.00	643,029			2,572,116			
MAT-7030	Slab Drain	Type-2 / Flexible Tube 1.5m	no	8.00	1.0	8.00			19,105			152,840	
Total										50,536,534		166,660	

Item: Concrete Anchor Bolt Installation Works

Spec.: Unit: 100 no

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
1,376		3.6	118

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.90	1.50	1.35	24,300			32,805			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	2.70	1.50	4.05	16,200			65,610			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	1.80	1.50	2.70	13,500			36,450			Simple Labour Corr. = 1.50 (P.39)
	Concrete Anchor Bolt		no	100.00	1.0	100.00							Calculated Separately
SUN-3	Sundry Expenses	On labour & material costs	%	2.00	1.0	2.00	134,865		17,920	2,697		358	
Total										137,562		358	

Item: Drainage Pipe Installation

Spec.: PVC Pipe　　Unit: 10 m

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.880

Unit Price			Yen Conv.
MMK	USD	JPY	
4,496			374

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.30	1.50	0.45	24,300			10,935			Simple Labour Corr. = 1.50 (P.39)
LBR-2	Skilled Labour		day	0.90	1.50	1.35	16,200			21,870			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	0.60	1.50	0.90	13,500			12,150			Simple Labour Corr. = 1.50 (P.39)
	PVC Pipe		m	10.00	1.0	10.00							Calculated Separately
SUN-S	Sundry Expenses		L.Sum	1.00	1.0	1.00							
Total										44,955			

Item: Fence Installation

Spec.: Wire Mesh Fence　　Unit: 100 m

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
82,071			6,828

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Material Cost】												
MAT-2033	Fence (Metallic Net Type)	Φ3.2×50mm (H=1800)	m	100.00	1.0	100.00	77,764			7,776,400			
ITEM-45	Crush Stone Base Works	t=10cm	m2	0.00	1.0	0.00	8,690						
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	0.00	1.0	0.00	102,591						
ITEM-92	Formworks	Small Structures	m2	0.00	1.0	0.00	14,632						
	【Instalation Cost】												
ITEM-206	Wire Mesh Fence Installation	Foundation Block	no	50.00	1.0	50.00	2,790			139,500			Material Costs Not Included
ITEM-207	Wire Mesh Fence Installation	Fence Post	no	50.00	1.0	50.00	1,296			64,800			Material Costs Not Included
ITEM-208	Wire Mesh Fence Installation	Wire Mesh	m	100.00	1.0	100.00	2,264			226,400			Material Costs Not Included
Total										8,207,100			

Item: Fence Installation

Spec.: Wire Mesh Gate　　Unit: 10 no

Source:: Composite Item

Unit Price			Yen Conv.
MMK	USD	JPY	
4,740,786			394,433

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Material Cost】												
MAT-2034	Gate (Metallic Net Type)	1800 × 4000	no	10.00	1.0	10.00	4,723,558			47,235,580			
ITEM-45	Crush Stone Base Works	t=10cm	m2	0.00	1.0	0.00	8,690						
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	0.00	1.0	0.00	102,591						
ITEM-92	Formworks	Small Structures	m2	0.00	1.0	0.00	14,632						
	【Instalation Cost】												
ITEM-206	Wire Mesh Fence Installation	Foundation Block	no	20.00	1.0	20.00	2,790			55,800			Material Costs Not Included
ITEM-207	Wire Mesh Fence Installation	Fence Post	no	20.00	1.0	20.00	1,296			25,920			Material Costs Not Included
ITEM-208	Wire Mesh Fence Installation	Wire Mesh	m	40.00	1.0	40.00	2,264			90,560			Material Costs Not Included
Total										47,407,860			

Item:	Wire Mesh Fence Installation			
Spec.:	Foundation Block	Unit:	100	no
Source::	MLIT Cost Estimate Standard for Civil Works/2013 P.942			

Unit Price			Yen Conv.
MMK	USD	JPY	
2,790			232

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.10	1.50	1.65	24,300			40,095			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	11.80	1.50	17.70	13,500			238,950			Simple Labour Corr. = 1.50 (P.39)
	Foundation Block		no	100.00	1.00	100.00							Calculated Separately
SUN-S	Sundry Expenses		L.Sum	1.00	1.00	1.00							

【Notes】

●Foundation block, excavation and backfill works included.

Total	279,045			

Item: Wire Mesh Fence Installation

Spec.: Fence Post　　Unit: 100 no

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.942

Unit Price			Yen Conv.
MMK	USD	JPY	
1,296			108

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.80	1.50	1.20	24,300			29,160			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	4.60	1.50	6.90	13,500			93,150			Simple Labour Corr. = 1.50 (P.39)
	Fence Post		no	100.00	1.00	100.00							Calculated Separately
SUN-1	Sundry Expenses	On labour costs	%	6.00	1.00	6.00	122,310			7,339			
Total										129,649			

Item: Wire Mesh Fence Installation

Spec.: Wire Mesh　　Unit: 100 m

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.942

Unit Price			Yen Conv.
MMK	USD	JPY	
2,264			188

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	0.60	1.50	0.90	24,300			21,870			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	10.10	1.50	15.15	13,500			204,525			Simple Labour Corr. = 1.50 (P.39)
	Wire Mesh		m	100.00	1.00	100.00							Calculated Separately
SUN-S	Sundry Expenses		L.Sum	1.00	1.00	1.00							
Total										226,395			

Item: New Table

Spec.:

Unit: 10 place

Source:: MLIT Cost Estimate Standard for Civil Works/2013 P.974

Unit Price			Yen Conv.
MMK	USD	JPY	
11,745			977

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
LBR-1	Foreman		day	1.00	1.50	1.50	24,300			36,450			Simple Labour Corr. = 1.50 (P.39)
LBR-3	Unskilled Labour		day	4.00	1.50	6.00	13,500			81,000			Simple Labour Corr. = 1.50 (P.39)
	Drain		no	10.00	1.00	10.00							Calculated Separately
SUN-S	Sundry Expenses		L.Sum	1.00	1.00	1.00							
Total										117,450			

Item: Water Collector Install

Spec.: 600×600×1100 Unit: 10 no

Source:: Road Quantities Calculation P.1

Unit Price			Yen Conv.
MMK	USD	JPY	
471,539		3,577	42,809

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	1.16	1.0	1.16	104,911			121,697			
ITEM-94	Formworks	For Levelling Concrete	m2	4.20	1.0	4.20	8,298			34,852			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	8.40	1.0	8.40	107,336			901,622			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.420	1.0	0.420	279,905		62,640	117,560		26,309	
ITEM-92	Formworks	Small Structures	m2	76.40	1.0	76.40	14,632			1,117,885			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	1.03	1.0	1.03	107,336			110,556			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.151	1.0	0.151	279,905		62,640	42,266		9,459	
ITEM-92	Formworks	Small Structures	m2	7.20	1.0	7.20	14,632			105,350			
	【PVC Pipe】												
ITEM-203	Drainage Pipe Installation	PVC Pipe	m	14.30	1.0	14.30	4,496			64,293			
MAT-7007	PVC Pipe	200mm	m	8.50	1.0	8.50	35,156			298,826			
MAT-7008	PVC Pipe	200mm / Elbow 45°	no	20.00	1.0	20.00	90,024			1,800,480			
Total										4,715,387		35,768	

Item: Water Collector Install

Spec.: Type A　　Unit: 10 no

Source:: Road Quantities Calculation P.2

Unit Price			Yen Conv.
MMK	USD	JPY	
320,121		702	27,336

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-83	Mortar Mix	1:3	m3	0.33	1.0	0.33	81,822			27,001			
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	2.23	1.0	2.23	102,591			228,778			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.112	1.0	0.112	279,905		62,640	31,349		7,016	
ITEM-92	Formworks	Small Structures	m2	30.35	1.0	30.35	14,632			444,081			
	【Cover】												
MAT-7004	Grating Cover	520×600×50mm	m2	3.12	1.0	3.12	791,667			2,470,001			520×600×10 no=3.12 m2
Total										3,201,210		7,016	

Item: Water Collector Install

Spec.: Type B　　Unit: 10 no

Source:: Road Quantities Calculation P.3

Unit Price			Yen Conv.
MMK	USD	JPY	
731,323		2,687	63,533

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	104.35	1.0	104.35	2,801			292,284			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	14.40	1.0	14.40	61			876			
ITEM-37	Backfilling Type D		m3	89.91	1.0	89.91	5,035			452,697			
ITEM-38	Surplus Transport	Sand Soil	m3	4.45	1.0	4.45	4,674			20,799			
	【Main Body】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	14.40	1.0	14.40	8,690			125,136			
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	8.57	1.0	8.57	102,591			879,205			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.429	1.0	0.429	279,905		62,640	120,079		26,873	
ITEM-92	Formworks	Small Structures	m2	78.40	1.0	78.40	14,632			1,147,149			
	【Cover】												
MAT-7005	Grating Cover	600×600×75mm	m2	3.60	1.0	3.60	1,187,500			4,275,000			600×600×10 no=3.60 m2
Total										7,313,225		26,873	

Item: Pipe Culvert (Φ300mm)

Spec.: Type A　　Unit: 100 m

Source:: Road Quantities Calculation P.4

Unit Price			Yen Conv.
MMK	USD	JPY	
80,790		953	7,675

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	140.40	1.0	140.40	2,801			393,260			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	66.00	1.0	66.00	61			4,013			
ITEM-37	Backfilling Type D		m3	102.44	1.0	102.44	5,035			515,785			
ITEM-38	Surplus Transport	Sand Soil	m3	26.58	1.0	26.58	4,674			124,235			
	【Main Body】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	66.00	1.0	66.00	8,690			573,540			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	21.18	1.0	21.18	107,336			2,273,376			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.522	1.0	1.522	279,905		62,640	426,015		95,338	
ITEM-92	Formworks	Small Structures	m2	112.00	1.0	112.00	14,632			1,638,784			
	【Concrete Pipe】												
MAT-7006	RCC Hume Pipe	300mm	m	100.00	1.0	100.00	21,300			2,130,000			
Total										8,079,008		95,338	

Item: Pipe Culvert (Φ300mm)

Spec.: Type B　　Unit: 100 m

Source:: Road Quantities Calculation P.5

Unit Price			Yen Conv.
MMK	USD	JPY	
66,842		953	6,514

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-83	Mortar Mix	1:3	m3	2.64	1.0	2.64	81,822			216,010			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	21.18	1.0	21.18	107,336			2,273,376			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.522	1.0	1.522	279,905		62,640	426,015		95,338	
ITEM-92	Formworks	Small Structures	m2	112.00	1.0	112.00	14,632			1,638,784			
	【Concrete Pipe】												
MAT-7006	RCC Hume Pipe	300mm	m	100.00	1.0	100.00	21,300			2,130,000			
Total										6,684,185		95,338	

Item: U Ditch

Spec.: Type A　　Unit: 10 no

Source:: Road Quantities Calculation P.6

Unit Price			Yen Conv.
MMK	USD	JPY	
242,467		2,524	22,697

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	30.71	1.0	30.71	8,690			266,870			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	8.15	1.0	8.15	107,336			874,788			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.346	1.0	0.346	279,905		62,640	96,847		21,673	
ITEM-92	Formworks	Small Structures	m2	64.98	1.0	64.98	14,632			950,787			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	1.27	1.0	1.27	107,336			136,317			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.057	1.0	0.057	279,905		62,640	15,955		3,570	
ITEM-92	Formworks	Small Structures	m2	5.68	1.0	5.68	14,632			83,110			
Total										2,424,674		25,243	

Item: U Ditch

Spec.: Type B　　Unit: 10 no

Source:: Road Quantities Calculation P.7

Unit Price			Yen Conv.
MMK	USD	JPY	
16,741			1,393

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	2.80	1.0	2.80	8,690			24,332			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	0.74	1.0	0.74	107,336			79,429			
ITEM-92	Formworks	Small Structures	m2	4.35	1.0	4.35	14,632			63,649			
Total										167,410			

Item: U Ditch

Spec.: Type C　　Unit: 10 no

Source:: Road Quantities Calculation P.8

Unit Price			Yen Conv.
MMK	USD	JPY	
185,534			15,436

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	2.80	1.0	2.80	8,690			24,332			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	0.82	1.0	0.82	107,336			88,016			
ITEM-92	Formworks	Small Structures	m2	11.30	1.0	11.30	14,632			165,342			
	【PVC Pipe】												
ITEM-203	Drainage Pipe Installation	PVC Pipe	m	23.42	1.0	23.42	4,496			105,296			
MAT-7007	PVC Pipe	200mm	m	20.00	1.0	20.00	35,156			703,120			
MAT-7009	PVC Pipe	200mm / Elbow 90°	no	10.00	1.0	10.00	76,923			769,230			
Total										1,855,336			

Item: U-Type Side Gutter Install

Spec.: 500×500 (With Cover) Unit: 100 m

Source:: Road Quantities Calculation P.9

Unit Price			Yen Conv.
MMK	USD	JPY	
132,856		1,659	12,713

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	216.00	1.0	216.00	2,801			605,016			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	95.00	1.0	95.00	61			5,776			
ITEM-37	Backfilling Type D		m3	140.40	1.0	140.40	5,035			706,914			
ITEM-38	Surplus Transport	Sand Soil	m3	60.00	1.0	60.00	4,674			280,440			
	【Main Body】												
ITEM-46	Crush Stone Base Works	t=15cm	m2	95.00	1.0	95.00	11,480			1,090,600			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	9.50	1.0	9.50	104,911			996,655			
ITEM-94	Formworks	For Levelling Concrete	m2	30.00	1.0	30.00	8,298			248,940			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	25.32	1.0	25.32	107,336			2,717,748			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.990	1.0	1.990	279,905		62,640	557,011		124,654	
ITEM-92	Formworks	Small Structures	m2	230.00	1.0	230.00	14,632			3,365,360			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	7.56	1.0	7.56	107,336			811,460			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.658	1.0	0.658	279,905		62,640	184,177		41,217	
ITEM-92	Formworks	Small Structures	m2	117.24	1.0	117.24	14,632			1,715,456			
Total										13,285,553		165,871	

Item: U-Type Side Gutter Install

Spec.: 500×850 (With Cover) Unit: 100 m

Source:: Road Quantities Calculation P.10

Unit Price			Yen Conv.
MMK	USD	JPY	
174,598		2,127	16,654

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	321.88	1.0	321.88	2,801			901,586			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	95.00	1.0	95.00	61			5,776			
ITEM-37	Backfilling Type D		m3	153.60	1.0	153.60	5,035			773,376			
ITEM-38	Surplus Transport	Sand Soil	m3	151.21	1.0	151.21	4,674			706,756			
	【Main Body】												
ITEM-46	Crush Stone Base Works	t=15cm	m2	95.00	1.0	95.00	11,480			1,090,600			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	9.50	1.0	9.50	104,911			996,655			
ITEM-94	Formworks	For Levelling Concrete	m2	30.00	1.0	30.00	8,298			248,940			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	35.82	1.0	35.82	107,336			3,844,776			
ITEM-80	Rebar Works	Less or equal to Φ13	t	2.738	1.0	2.738	279,905		62,640	766,380		171,508	
ITEM-92	Formworks	Small Structures	m2	370.00	1.0	370.00	14,632			5,413,840			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	7.56	1.0	7.56	107,336			811,460			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.658	1.0	0.658	279,905		62,640	184,177		41,217	
ITEM-92	Formworks	Small Structures	m2	117.24	1.0	117.24	14,632			1,715,456			
Total										17,459,778		212,725	

Item: U-Type Side Gutter Install

Spec.: 800×800 (With Cover) Unit: 100 m

Source:: Road Quantities Calculation P.11

Unit Price			Yen Conv.
MMK	USD	JPY	
195,144		2,544	18,780

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	342.00	1.0	342.00	2,801			957,942			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	125.00	1.0	125.00	61			7,600			
ITEM-37	Backfilling Type D		m3	206.20	1.0	206.20	5,035			1,038,217			
ITEM-38	Surplus Transport	Sand Soil	m3	112.89	1.0	112.89	4,674			527,648			
	【Main Body】												
ITEM-46	Crush Stone Base Works	t=15cm	m2	125.00	1.0	125.00	11,480			1,435,000			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	12.50	1.0	12.50	104,911			1,311,388			
ITEM-94	Formworks	For Levelling Concrete	m2	30.00	1.0	30.00	8,298			248,940			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	38.82	1.0	38.82	107,336			4,166,784			
ITEM-80	Rebar Works	Less or equal to Φ13	t	2.738	1.0	2.738	279,905		62,640	766,380		171,508	
ITEM-92	Formworks	Small Structures	m2	350.00	1.0	350.00	14,632			5,121,200			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	11.16	1.0	11.16	107,336			1,197,870			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.323	1.0	1.323	279,905		62,640	370,314		82,873	
ITEM-92	Formworks	Small Structures	m2	161.64	1.0	161.64	14,632			2,365,116			
Total										19,514,399		254,381	

Item: U-Type Side Gutter Install

Spec.: 1000×1500 Unit: 100 m

Source:: Road Quantities Calculation P.12

Unit Price			Yen Conv.
MMK	USD	JPY	
271,777		2,867	25,479

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	690.00	1.0	690.00	2,801			1,932,690			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	145.00	1.0	145.00	61			8,816			
ITEM-36	Backfilling Type C		m3	425.50	1.0	425.50	5,166			2,198,133			
ITEM-38	Surplus Transport	Sand Soil	m3	217.22	1.0	217.22	4,674			1,015,286			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	145.00	1.0	145.00	14,270			2,069,150			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	14.50	1.0	14.50	104,911			1,521,210			
ITEM-94	Formworks	For Levelling Concrete	m2	20.00	1.0	20.00	8,298			165,960			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	71.00	1.0	71.00	107,336			7,620,856			
ITEM-80	Rebar Works	Less or equal to Φ13	t	4.577	1.0	4.577	279,905		62,640	1,281,125		286,703	
ITEM-92	Formworks	Small Structures	m2	640.00	1.0	640.00	14,632			9,364,480			
Total										27,177,706		286,703	

Item: U-Type Side Gutter Install

Spec.: 1500×1500 Unit: 100 m

Source:: Road Quantities Calculation P.13

Unit Price			Yen Conv.
MMK	USD	JPY	
301,694		3,210	28,311

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	760.00	1.0	760.00	2,801			2,128,760			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	195.00	1.0	195.00	61			11,856			
ITEM-36	Backfilling Type C		m3	395.50	1.0	395.50	5,166			2,043,153			
ITEM-38	Surplus Transport	Sand Soil	m3	320.56	1.0	320.56	4,674			1,498,297			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	195.00	1.0	195.00	14,270			2,782,650			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	19.50	1.0	19.50	104,911			2,045,765			
ITEM-94	Formworks	For Levelling Concrete	m2	20.00	1.0	20.00	8,298			165,960			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	81.00	1.0	81.00	107,336			8,694,216			
ITEM-80	Rebar Works	Less or equal to Φ13	t	5.124	1.0	5.124	279,905		62,640	1,434,233		320,967	
ITEM-92	Formworks	Small Structures	m2	640.00	1.0	640.00	14,632			9,364,480			
Total										30,169,370		320,967	

Item: U-Type Side Gutter Install

Spec.: 1500×1700 Unit: 100 m

Source:: Road Quantities Calculation P.14

Unit Price			Yen Conv.
MMK	USD	JPY	
352,922		3,490	32,853

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	880.00	1.0	880.00	2,801			2,464,880			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	205.00	1.0	205.00	61			12,464			
ITEM-36	Backfilling Type C		m3	457.50	1.0	457.50	5,166			2,363,445			
ITEM-38	Surplus Transport	Sand Soil	m3	371.67	1.0	371.67	4,674			1,737,186			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	205.00	1.0	205.00	14,270			2,925,350			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	20.50	1.0	20.50	104,911			2,150,676			
ITEM-94	Formworks	For Levelling Concrete	m2	20.00	1.0	20.00	8,298			165,960			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	106.00	1.0	106.00	107,336			11,377,616			
ITEM-80	Rebar Works	Less or equal to Φ13	t	5.572	1.0	5.572	279,905		62,640	1,559,631		349,030	
ITEM-92	Formworks	Small Structures	m2	720.00	1.0	720.00	14,632			10,535,040			
Total										35,292,248		349,030	

Item: Concrete Cover

Spec.: Type A　　Unit: 100 no

Source:: Road Quantities Calculation P.15

Unit Price			Yen Conv.
MMK	USD	JPY	
19,911		536	2,193

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	9.30	1.0	9.30	107,336			998,225			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.856	1.0	0.856	279,905		62,640	239,599		53,620	
ITEM-92	Formworks	Small Structures	m2	51.48	1.0	51.48	14,632			753,255			
Total										1,991,079		53,620	

Item: Concrete Cover

Spec.: Type B　　Unit: 100 no

Source:: Road Quantities Calculation P.16

Unit Price			Yen Conv.
MMK	USD	JPY	
29,235		773	3,205

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	14.16	1.0	14.16	107,336			1,519,878			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.234	1.0	1.234	279,905		62,640	345,403		77,298	
ITEM-92	Formworks	Small Structures	m2	72.32	1.0	72.32	14,632			1,058,186			
Total										2,923,467		77,298	

Item: Box Culvert

Spec.: 1000×1000 Unit: 10 m

Source:: Road Quantities Calculation P.17

Unit Price			Yen Conv.
MMK	USD	JPY	
413,000		7,642	42,004

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	91.20	1.0	91.20	2,801			255,451			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	26.00	1.0	26.00	61			1,581			
ITEM-36	Backfilling Type C		m3	60.20	1.0	60.20	5,166			310,993			
ITEM-38	Surplus Transport	Sand Soil	m3	24.31	1.0	24.31	4,674			113,625			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	18.00	1.0	18.00	14,270			256,860			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	1.80	1.0	1.80	104,911			188,840			
ITEM-94	Formworks	For Levelling Concrete	m2	2.00	1.0	2.00	8,298			16,596			
ITEM-50	Box Culvert (Type 2)	24N/mm2	m3	16.00	1.0	16.00	105,463			1,687,408			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.220	1.0	1.220	279,905		62,640	341,484		76,421	
ITEM-92	Formworks	Small Structures	m2	59.66	1.0	59.66	14,632			872,945			
ITEM-100	Scaffolding Works	Handrail Assembling Type	m2	1.22	1.0	1.22	11,247			13,721			
ITEM-102	Falsework	Wedge Connection Type	m3	9.60	1.0	9.60	7,343			70,493			
Total										4,129,997		76,421	

Item: Box Culvert

Spec.: 1500×1000 Unit: 10 m

Source:: Road Quantities Calculation P.18

Unit Price			Yen Conv.
MMK	USD	JPY	
484,284		9,177	49,469

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	103.20	1.0	103.20	2,801			289,063			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	31.00	1.0	31.00	61			1,885			
ITEM-36	Backfilling Type C		m3	62.70	1.0	62.70	5,166			323,908			
ITEM-38	Surplus Transport	Sand Soil	m3	33.53	1.0	33.53	4,674			156,719			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	23.00	1.0	23.00	14,270			328,210			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	2.30	1.0	2.30	104,911			241,295			
ITEM-94	Formworks	For Levelling Concrete	m2	2.00	1.0	2.00	8,298			16,596			
ITEM-50	Box Culvert (Type 2)	24N/mm2	m3	19.00	1.0	19.00	105,463			2,003,797			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.465	1.0	1.465	279,905		62,640	410,061		91,768	
ITEM-92	Formworks	Small Structures	m2	64.66	1.0	64.66	14,632			946,105			
ITEM-100	Scaffolding Works	Handrail Assembling Type	m2	1.60	1.0	1.60	11,247			17,995			
ITEM-102	Falsework	Wedge Connection Type	m3	14.60	1.0	14.60	7,343			107,208			
Total										4,842,842		91,768	

Item: Box Culvert

Spec.: 1500×1500 Unit: 10 m

Source:: Road Quantities Calculation P.19

Unit Price			Yen Conv.
MMK	USD	JPY	
577,454		10,260	58,304

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	131.95	1.0	131.95	2,801			369,592			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	31.00	1.0	31.00	61			1,885			
ITEM-36	Backfilling Type C		m3	80.95	1.0	80.95	5,166			418,188			
ITEM-38	Surplus Transport	Sand Soil	m3	42.01	1.0	42.01	4,674			196,355			
	【Main Body】												
ITEM-47	Crush Stone Base Works	t=20cm	m2	23.00	1.0	23.00	14,270			328,210			
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	2.30	1.0	2.30	104,911			241,295			
ITEM-94	Formworks	For Levelling Concrete	m2	2.00	1.0	2.00	8,298			16,596			
ITEM-50	Box Culvert (Type 2)	24N/mm2	m3	22.00	1.0	22.00	105,463			2,320,186			
ITEM-80	Rebar Works	Less or equal to Φ13	t	1.638	1.0	1.638	279,905		62,640	458,484		102,604	
ITEM-92	Formworks	Small Structures	m2	84.66	1.0	84.66	14,632			1,238,745			
ITEM-100	Scaffolding Works	Handrail Assembling Type	m2	2.02	1.0	2.02	11,247			22,719			
ITEM-102	Falsework	Wedge Connection Type	m3	22.10	1.0	22.10	7,343			162,280			
Total										5,774,535		102,604	

Item: Curb Stone Installation

Spec.: Type A-1 Unit: 100 m

Source:: Road Quantities Calculation P.20

Unit Price			Yen Conv.
MMK	USD	JPY	
19,035			1,584

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Curbstone Fabrication】												
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	4.81	1.0	4.81	102,591			493,463			
ITEM-92	Formworks	Small Structures	m2	50.12	1.0	50.12	14,632			733,356			
	【Block Installation】												
ITEM-126	Block Installation	Length ≤ 600 mm / Weight<50 kg	m	100.00	1.0	100.00	3,364			336,400			Material Cost Not Included
	【Base Works】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	30.50	1.0	30.50	8,690			265,045			
ITEM-83	Mortar Mix	1:3	m3	0.92	1.0	0.92	81,822			75,276			
Total										1,903,540			

Item: Curb Stone Installation

Spec.: Type A-2 Unit: 100 m

Source:: Road Quantities Calculation P.21

Unit Price			Yen Conv.
MMK	USD	JPY	
14,650			1,219

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Curbstone Fabrication】												
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	3.08	1.0	3.08	102,591			315,980			
ITEM-92	Formworks	Small Structures	m2	32.28	1.0	32.28	14,632			472,321			
	【Block Installation】												
ITEM-126	Block Installation	Length ≤ 600 mm / Weight<50 kg	m	100.00	1.0	100.00	3,364			336,400			Material Cost Not Included
	【Base Works】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	30.50	1.0	30.50	8,690			265,045			
ITEM-83	Mortar Mix	1:3	m3	0.92	1.0	0.92	81,822			75,276			
Total										1,465,022			

Item: Curb Stone Installation

Spec.: Type A-3 Unit: 100 m

Source:: Road Quantities Calculation P.22

Unit Price			Yen Conv.
MMK	USD	JPY	
10,264			854

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Curbstone Fabrication】												
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	1.35	1.0	1.35	102,591			138,498			
ITEM-92	Formworks	Small Structures	m2	14.43	1.0	14.43	14,632			211,140			
	【Block Installation】												
ITEM-126	Block Installation	Length ≤ 600 mm / Weight<50 kg	m	100.00	1.0	100.00	3,364			336,400			Material Cost Not Included
	【Base Works】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	30.50	1.0	30.50	8,690			265,045			
ITEM-83	Mortar Mix	1:3	m3	0.92	1.0	0.92	81,822			75,276			
Total										1,026,359			

Item: Curb Stone Installation

Spec.: Type C　　Unit: 100 m

Source:: Road Quantities Calculation P.23

Unit Price			Yen Conv.
MMK	USD	JPY	
11,584			964

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Curbstone Fabrication】												
ITEM-89	Struc. Concrete (Small Struc.)	18N/mm2 / Manual Cast	m3	1.80	1.0	1.80	102,591			184,664			
ITEM-92	Formworks	Small Structures	m2	30.00	1.0	30.00	14,632			438,960			
	【Block Installation】												
ITEM-126	Block Installation	Length ≤ 600 mm / Weight<50 kg	m	100.00	1.0	100.00	3,364			336,400			Material Cost Not Included
	【Base Works】												
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	1.10	1.0	1.10	104,911			115,402			
ITEM-94	Formworks	For Levelling Concrete	m2	10.00	1.0	10.00	8,298			82,980			
Total										1,158,406			

Item: Traffic Regulatory Sign

Spec.: Unit: 10 no

Source:: Road Quantities Calculation P.27

Unit Price			Yen Conv.
MMK	USD	JPY	
439,541			36,570

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	18.96	1.0	18.96	2,801			53,107			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	14.40	1.0	14.40	61			876			
ITEM-37	Backfilling Type D		m3	16.16	1.0	16.16	5,035			81,366			
ITEM-38	Surplus Transport	Sand Soil	m3	1.00	1.0	1.00	4,674			4,674			
	【Foundation】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	6.40	1.0	6.40	8,690			55,616			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	2.16	1.0	2.16	107,336			231,846			
ITEM-92	Formworks	Small Structures	m2	14.40	1.0	14.40	14,632			210,701			
	【Foundation】												
MAT-7034	Steel Post	Φ60.5mm / 4.5m	no	10.00	1.0	10.00	119,712			1,197,120			
MAT-7035	Traffic Regulatory Sign	Φ600mm	no	10.00	1.0	10.00	256,010			2,560,100			
Total										4,395,406			

Item: Traffic Warning Sign

Spec.:

Unit: 10 no

Source:: Road Quantities Calculation P.27

Unit Price			Yen Conv.
MMK	USD	JPY	
821,752			68,370

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	18.96	1.0	18.96	2,801			53,107			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	14.40	1.0	14.40	61			876			
ITEM-37	Backfilling Type D		m3	16.16	1.0	16.16	5,035			81,366			
ITEM-38	Surplus Transport	Sand Soil	m3	1.00	1.0	1.00	4,674			4,674			
	【Foundation】												
ITEM-45	Crush Stone Base Works	t=10cm	m2	6.40	1.0	6.40	8,690			55,616			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	2.16	1.0	2.16	107,336			231,846			
ITEM-92	Formworks	Small Structures	m2	14.40	1.0	14.40	14,632			210,701			
	【Foundation】												
MAT-7036	Traffic Warning Sign	600×600	no	10.00	1.0	10.00	501,923			5,019,230			
MAT-7035	Traffic Regulatory Sign	Φ600mm	no	10.00	1.0	10.00	256,010			2,560,100			
Total										8,217,516			

Item: Balustrade

Spec.: For Concrete Base (H=1100) Unit: 100 m

Source:: Road Quantities Calculation P.32

Unit Price			Yen Conv.
MMK	USD	JPY	
108,746		43	9,090

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	4.17	1.0	4.17	2,801			11,680			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	8.33	1.0	8.33	61			506			
ITEM-37	Backfilling Type D		m3	2.40	1.0	2.40	5,035			12,084			
ITEM-38	Surplus Transport	Sand Soil	m3	1.50	1.0	1.50	4,674			7,011			
	【Foundation】												
ITEM-44	Crush Stone Base Works	t=5cm	m2	3.00	1.0	3.00	5,900			17,700			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	1.35	1.0	1.35	107,336			144,904			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.068	1.0	0.068	279,905		62,640	19,034		4,260	
ITEM-92	Formworks	Small Structures	m2	18.00	1.0	18.00	14,632			263,376			
	【Foundation】												
MAT-2032	Balustrade	For Concrete Base (H=1100)	m	100.00	1.0	100.00	102,764			10,276,400			
ITEM-124	Balustrade Installation	Manual / Post Space 3m	m	100.00	1.0	100.00	1,219			121,900			Material Cost Not Included
Total										10,874,595		4,260	

Item: U-Type Side Gutter Install

Spec.: 300×300 Unit: 10 m

Source:: Road Quantities Calculation P.9

Unit Price			Yen Conv.
MMK	USD	JPY	
51,550			4,289

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	10.00	1.0	10.00	2,801			28,010			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	0.00	1.0	0.00	61						
ITEM-37	Backfilling Type D		m3	6.94	1.0	6.94	5,035			34,943			
ITEM-38	Surplus Transport	Sand Soil	m3	0.00	1.0	0.00	4,674						
	【Main Body】												
ITEM-46	Crush Stone Base Works	t=15cm	m2	0.00	1.0	0.00	11,480						
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	0.38	1.0	0.38	104,911			39,866			
ITEM-94	Formworks	For Levelling Concrete	m2	0.00	1.0	0.00	8,298						
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	1.80	1.0	1.80	107,336			193,205			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.000	1.0	0.000	279,905		62,640				
ITEM-92	Formworks	Small Structures	m2	15.00	1.0	15.00	14,632			219,480			
Total										515,504			

Item: U-Type Side Gutter Install

Spec.: 300×300 TYPE V　　Unit: 10 m

Source:: Road Quantities Calculation P.9

Unit Price			Yen Conv.
MMK	USD	JPY	
55,013			4,577

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Earthworks】												
ITEM-33	Backhoe Excavation	0.8m3	m3	10.00	1.0	10.00	2,801			28,010			
ITEM-34	Excavation Auxiliary Labour	Base Adjusting	m2	0.00	1.0	0.00	61						
ITEM-37	Backfilling Type D		m3	6.94	1.0	6.94	5,035			34,943			
ITEM-38	Surplus Transport	Sand Soil	m3	0.00	1.0	0.00	4,674						
	【Main Body】												
ITEM-46	Crush Stone Base Works	t=15cm	m2	0.00	1.0	0.00	11,480						
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	0.71	1.0	0.71	104,911			74,487			
ITEM-94	Formworks	For Levelling Concrete	m2	0.00	1.0	0.00	8,298						
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	1.80	1.0	1.80	107,336			193,205			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.000	1.0	0.000	279,905		62,640				
ITEM-92	Formworks	Small Structures	m2	15.00	1.0	15.00	14,632			219,480			
Total										550,125			

Item: Water Collector Install

Spec.: 600×600×500 Unit: 10 no

Source:: Road Quantities Calculation P.1

Unit Price			Yen Conv.
MMK	USD	JPY	
314,260		539	26,685

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	0.81	1.0	0.81	104,911			84,978			
ITEM-94	Formworks	For Levelling Concrete	m2	3.60	1.0	3.60	8,298			29,873			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	2.46	1.0	2.46	107,336			264,047			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.000	1.0	0.000	279,905		62,640				
ITEM-92	Formworks	Small Structures	m2	28.75	1.0	28.75	14,632			420,670			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	0.64	1.0	0.64	107,336			68,695			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.086	1.0	0.086	279,905		62,640	24,072		5,387	
ITEM-92	Formworks	Small Structures	m2	6.35	1.0	6.35	14,632			92,913			
	【PVC Pipe】												
ITEM-203	Drainage Pipe Installation	PVC Pipe	m	9.00	1.0	9.00	4,496			40,464			
MAT-7007	PVC Pipe	200mm	m	9.00	1.0	9.00	35,156			316,404			
MAT-7008	PVC Pipe	200mm / Elbow 45°	no	20.00	1.0	20.00	90,024			1,800,480			
Total										3,142,596		5,387	

Item: Water Collector Install

Spec.: 600×600×1200 Unit: 10 no

Source:: Road Quantities Calculation P.1

Unit Price			Yen Conv.
MMK	USD	JPY	
222,995		645	19,198

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
	【Main Body】												
ITEM-84	Levelling Concrete	18N/mm2 / Conc. Pump Cast	m3	1.00	1.0	1.00	104,911			104,911			
ITEM-94	Formworks	For Levelling Concrete	m2	4.00	1.0	4.00	8,298			33,192			
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	7.55	1.0	7.55	107,336			810,387			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.000	1.0	0.000	279,905		62,640				
ITEM-92	Formworks	Small Structures	m2	72.82	1.0	72.82	14,632			1,065,502			
	【Cover】												
ITEM-90	Struc. Concrete (Small Struc.)	24N/mm2 / Manual Cast	m3	0.86	1.0	0.86	107,336			92,309			
ITEM-80	Rebar Works	Less or equal to Φ13	t	0.103	1.0	0.103	279,905		62,640	28,830		6,452	
ITEM-92	Formworks	Small Structures	m2	6.48	1.0	6.48	14,632			94,815			
Total										2,229,946		6,452	

Item: Pipe Culvert (Φ900mm)

Spec.: 360° Unit: 10 m

Source:: Road Quantities Calculation P.5

Unit Price			Yen Conv.
MMK	USD	JPY	
487,937		4,565	45,161

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
Total										4,879,373		45,648	

Construction Equipment Operatin List

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
EOP-1	Bulldozer Operation	15t	day	323,350			26,903	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-2	Bulldozer Operation	7t (Swamp)	day	571,835			47,577	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-3	Backhoe Operation	0.28m3	day	163,069			13,567	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-4	Backhoe Operation	0.45m3	day	229,940			19,131	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-4	Backhoe Operation	0.45m3	h	36,673			3,051	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-5	Backhoe Operation	0.5m3	day	286,854			23,866	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-6	Backhoe Operation	0.8m3	day	368,008			30,618	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-6	Backhoe Operation	0.8m3	h	58,693			4,883	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-7	Backhoe Operation	0.5m3 / Lifting Capacity 2.9t	day	368,334			30,645	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-8	Backhoe Operation	0.8m3 / Lifting Capacity 2.9t	day	368,008			30,618	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-9	Dump Truck Operation	10t	day	194,375			16,172	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-9	Dump Truck Operation	10t	h	32,778			2,727	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-10	Truck Operation	2t	h	62,618			5,210	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-11	Truck Operation	3～3.5t	h	62,893			5,233	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-12	Crawler Crane Operation	40～45t	day	388,098			32,290	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-13	Rough Terrain Crane Operation	25t	day	314,820			26,193	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-14	Deep Layer Mixing Machine Operation	2 axis･1200mm･Up to 20m	h	8,280		19,600	20,289	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-15	Cement Slurry Plant Operation	20m3/h	h	108		4,631	4,640	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-16	Motor Grader Operation	3.1m	day	387,539			32,243	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-17	Road Roller Operation	10～12t	day	267,859			22,286	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-18	Pneumatic Tire Roller Operation	8～20t	day	321,233			26,727	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-19	Vibration Roller Operation	Hand Guide 0.8～1.1t	day	74,557			6,203	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-20	Vibration Roller Operation	Tandem 3～4t	day	117,472			9,774	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-21	Tamper Operation	60～80kg	day	32,737			2,724	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-22	Concrete Pump Truck Operation	90～110m3/h	day	855,000			71,136	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-22	Concrete Pump Truck Operation	90～110m3/h	h	124,636			10,370	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-23	Asphalt Finisher Operation	2.4～6.0m	day	644,800			53,647	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-24	Road Marking Paint Preheater Operation	Double Tank Thermoplastic / 200～350kg	h	9,389			781	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-25	Pin Grabber Coupler Backhoe	0.45m3	h	40,718			3,388	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-26	Vibro Hammer Operation	60W	day	677,700			56,385	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-27	Giant Breaker Operation	600～800kg	h	671			56	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-28	Platform Truck Operation	60t / Self Propelled	total days	192,973			16,055	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-29	Generator (For Construction Yard)	20/25kVA	month	1,791,660			149,066	MLIT Cost Estimate Standard for Civil Works/2016 P.907
EOP-30	Generator (For Construction Yard)	100/125kVA	month	6,159,270			512,451	MLIT Cost Estimate Standard for Civil Works/2016 P.907

Item: Bulldozer Operation

Spec.: 15t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
323,350			26,903

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-1	Bulldozer	15t	day	1.00	1.0	1.00	271,600			271,600			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	75.00	1.0	75.00	690			51,750			

【Notes】

● Construction Equipment Rental Table/2016 P01-1

Standard Operating Hours Per Year: a = 400 h ／ Standard Operating Days Per Year: b = 80 days

Fuel Consumption Per Hour: c = 15 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝400/80×15 = 75.00 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝400/80＝5.00 h

Unit Price			Yen Conv.
MMK	USD	JPY	
64,670			5,381

Total	323,350			

Item: Bulldozer Operation

Spec.: 7t (Swamp) Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
571,835			47,577

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-3	Bulldozer	7t (Swamp)	day	1.00	1.0	1.00	543,200			543,200			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	41.50	1.0	41.50	690			28,635			

【Notes】

● Construction Equipment Rental Table/2016 P01-3

Standard Operating Hours Per Year: a = 400 h ／ Standard Operating Days Per Year: b = 80 days

Fuel Consumption Per Hour: c = 8.3 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝400/80×8.3 = 41.50 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝400/80＝5.00 h

Unit Price			Yen Conv.
MMK	USD	JPY	
114,367			9,515

Total	571,835			

Item: Backhoe Operation

Spec.: 0.28m3 Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
163,069			13,567

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-4	Backhoe	0.28m3	day	1.00	1.0	1.00	135,800			135,800			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	39.52	1.0	39.52	690			27,269			

【Notes】

● Construction Equipment Rental Table/2016 P02-13

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 6.3 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×6.3 = 39.52 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
26,008			2,164

Total	163,069			

Item: Backhoe Operation

Spec.: 0.45m3 Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
229,940			19,131

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-5	Backhoe	0.45m3	day	1.00	1.0	1.00	190,120			190,120			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	57.71	1.0	57.71	690			39,820			

【Notes】

● Construction Equipment Rental Table/2016 P02-7

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 9.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×9.2 = 57.71 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
36,673			3,051

Total	229,940			

Item: Backhoe Operation

Spec.: 0.5m3 Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
286,854			23,866

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-6	Backhoe	0.5m3	day	1.00	1.0	1.00	244,440			244,440			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	61.47	1.0	61.47	690			42,414			

【Notes】

● Construction Equipment Rental Table/2016 P02-7

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 9.8 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×9.8 = 61.47 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
45,750			3,806

Total	286,854			

Item: Backhoe Operation

Spec.: 0.8m3 Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
368,008			30,618

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-7	Backhoe	0.8m3	day	1.00	1.0	1.00	298,760			298,760			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	100.36	1.0	100.36	690			69,248			

【Notes】

● Construction Equipment Rental Table/2016 P02-9

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 16 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×16 = 100.36 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
58,693			4,883

Total	368,008			

Item: Backhoe Operation

Spec.: 0.5m3 / Lifting Capacity 2.9t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
368,334			30,645

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-8	Backhoe	0.5m3 / Lifting Capacity 2.9t	day	1.00	1.0	1.00	325,920			325,920			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	61.47	1.0	61.47	690			42,414			

【Notes】

● Construction Equipment Rental Table/2016 P02-11

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 9.8 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×9.8 = 61.47 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
58,745			4,888

Total	368,334			

Item: Backhoe Operation

Spec.: 0.8m3 / Lifting Capacity 2.9t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
368,008			30,618

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-9	Backhoe	0.8m3 / Lifting Capacity 2.9t	day	1.00	1.0	1.00	298,760			298,760			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	100.36	1.0	100.36	690			69,248			

【Notes】

● Construction Equipment Rental Table/2016 P02-11

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 16 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×16 = 100.36 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝690/110＝6.27 h

Unit Price			Yen Conv.
MMK	USD	JPY	
58,693			4,883

Total	368,008			

Item: Dump Truck Operation

Spec.: 10t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
194,375			16,172

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-10	Dump Truck	10t	day	1.00	1.0	1.00	149,380			149,380			
LBR-7	Truck Driver		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	65.21	1.0	65.21	690			44,995			

【Notes】

● Construction Equipment Rental Table/2016 P03-1

Standard Operating Hours Per Year: a = 830 h ／ Standard Operating Days Per Year: b = 140 days

Fuel Consumption Per Hour: c = 11 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝830/140×11 = 65.21 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝830/140＝5.93 h

Unit Price			Yen Conv.
MMK	USD	JPY	
32,778			2,727

Total	194,375			

Item: Truck Operation

Spec.: 2t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
296,181			24,642

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-11	Truck	2t	day	1.00	1.0	1.00	282,464			282,464			
LBR-7	Truck Driver		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	19.88	1.0	19.88	690			13,717			

【Notes】

● Construction Equipment Rental Table/2016 P03-3

Standard Operating Hours Per Year: a = 710 h ／ Standard Operating Days Per Year: b = 150 days

Fuel Consumption Per Hour: c = 4.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝710/150×4.2 = 19.88 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝710/150＝4.73 h

Unit Price			Yen Conv.
MMK	USD	JPY	
62,618			5,210

Total	296,181			

Item: Truck Operation

Spec.: 3～3.5t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
297,485			24,751

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-12	Truck	3～3.5t	day	1.00	1.0	1.00	282,464			282,464			
LBR-7	Truck Driver		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	21.77	1.0	21.77	690			15,021			

【Notes】

● Construction Equipment Rental Table/2016 P03-3

Standard Operating Hours Per Year: a = 710 h ／ Standard Operating Days Per Year: b = 150 days

Fuel Consumption Per Hour: c = 4.6 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝710/150×4.6 = 21.77 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝710/150＝4.73 h

Unit Price			Yen Conv.
MMK	USD	JPY	
62,893			5,233

Total	297,485			

Item: Crawler Crane Operation

Spec.: 40～45t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
388,098			32,290

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-14	Crawler Crane	40～45t	day	1.00	1.0	1.00	353,080			353,080			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	50.75	1.0	50.75	690			35,018			

【Notes】

● Construction Equipment Rental Table/2016 P04-1

Standard Operating Hours Per Year: a = 700 h ／ Standard Operating Days Per Year: b = 120 days

Fuel Consumption Per Hour: c = 8.7 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝700/120×8.7 = 50.75 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝700/120＝5.83 h

Unit Price			Yen Conv.
MMK	USD	JPY	
66,569			5,539

Total	388,098			

Item: Rough Terrain Crane Operation

Spec.: 25t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
314,820			26,193

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-20	Rough Terrain Crane	25t	day	1.00	1.0	1.00	244,440			244,440			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	102.00	1.0	102.00	690			70,380			

【Notes】

● Construction Equipment Rental Table/2016 P04-9

Standard Operating Hours Per Year: a = 720 h ／ Standard Operating Days Per Year: b = 120 days

Fuel Consumption Per Hour: c = 17 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝720/120×17 = 102.00 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝720/120＝6.00 h

Unit Price			Yen Conv.
MMK	USD	JPY	
52,470			4,366

Total	314,820			

Item: Deep Layer Mixing Machine Operation

Spec.: 2 axis･1200mm･Up to 20m　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
45,540		107,800	111,589

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-23	Deep Layer Mixing Machine	2 axis･1200mm･Up to 20m	day	1.00	1.0	1.00			107,800			107,800	19,600×660／120＝107,800 JPY
SKW-1	Heavy Equipment Operator		day	1.00	1.0	1.00							
MAT-6002	Diesel		ℓ	66.00	1.0	66.00	690			45,540			

【Notes】

● Construction Equipment Rental Table/2016 P05-33

Standard Operating Hours Per Year: a = 660 h ／ Standard Operating Days Per Year: b = 120 days

Fuel Consumption Per Hour: c = 12 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝660/120×12 = 66.00 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝660/120＝5.50 h

Unit Price			Yen Conv.
MMK	USD	JPY	
8,280		19,600	20,289

Total			45,540		107,800	

Item: Cement Slurry Plant Operation

Spec.: 20m3/h　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
658		28,201	28,256

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-24	Cement Slurry Plant	20m3/h	day	1.00	1.0	1.00			28,201			28,201	4,630×670／110＝28,201 JPY
MAT-6003	Electricity		kW	328.91	1.0	328.91	2			658			

【Notes】

● Construction Equipment Rental Table/2016 P05-33

Standard Operating Hours Per Year: a = 670 h ／ Standard Operating Days Per Year: b = 110 days

Electricity Consumption Per Hour: c = 54 ℓ/h

Electricity Consumption Per Day: d＝a／b×c＝670/110×54 = 328.91 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝670/110＝6.09 h

Unit Price			Yen Conv.
MMK	USD	JPY	
108		4,631	4,640

Total	658		28,201	

Item: Motor Grader Operation

Spec.: 3.1m　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
387,539			32,243

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-25	Motor Grader	3.1m	day	1.00	1.0	1.00	353,080			353,080			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	49.94	1.0	49.94	690			34,459			

【Notes】

● Construction Equipment Rental Table/2016 P07-1

Standard Operating Hours Per Year: a = 380 h ／ Standard Operating Days Per Year: b = 70 days

Fuel Consumption Per Hour: c = 9.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝380/70×9.2 = 49.94 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝380/70＝5.43 h

Unit Price			Yen Conv.
MMK	USD	JPY	
71,370			5,938

Total	387,539			

Item: Road Roller Operation

Spec.: 10～12t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
267,859			22,286

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-26	Road Roller	10～12t	day	1.00	1.0	1.00	244,440			244,440			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	33.94	1.0	33.94	690			23,419			

【Notes】

● Construction Equipment Rental Table/2016 P08-1

Standard Operating Hours Per Year: a = 360 h ／ Standard Operating Days Per Year: b = 70 days

Fuel Consumption Per Hour: c = 6.6 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝360/70×6.6 = 33.94 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝360/70＝5.14 h

Unit Price			Yen Conv.
MMK	USD	JPY	
52,113			4,336

Total	267,859			

Item: Pneumatic Tire Roller Operation

Spec.: 8～20t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
321,233			26,727

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-27	Pneumatic Tire Roller	8～20t	day	1.00	1.0	1.00	298,760			298,760			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	32.57	1.0	32.57	690			22,473			

【Notes】

● Construction Equipment Rental Table/2016 P08-1

Standard Operating Hours Per Year: a = 380 h ／ Standard Operating Days Per Year: b = 70 days

Fuel Consumption Per Hour: c = 6 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝380/70×6 = 32.57 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝380/70＝5.43 h

Unit Price			Yen Conv.
MMK	USD	JPY	
59,159			4,922

Total	321,233			

Item: Vibration Roller Operation

Spec.: Hand Guide 0.8～1.1t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
74,557			6,203

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-28	Vibration Roller	Hand Guide 0.8～1.1t	day	1.00	1.0	1.00	54,320			54,320			
LBR-2	Skilled Labour		day	1.00	1.0	1.00	16,200			16,200			
MAT-6002	Diesel		ℓ	5.85	1.0	5.85	690			4,037			

【Notes】

● Construction Equipment Rental Table/2016 P08-3

Standard Operating Hours Per Year: a = 390 h ／ Standard Operating Days Per Year: b = 80 days

Fuel Consumption Per Hour: c = 1.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝390/80×1.2 = 5.85 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝390/80＝4.88 h

Unit Price			Yen Conv.
MMK	USD	JPY	
15,278			1,271

Total	74,557			

Item: Vibration Roller Operation

Spec.: Tandem 3～4t　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
117,472			9,774

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-29	Vibration Roller	Tandem 3～4t	day	1.00	1.0	1.00	108,640			108,640			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	12.80	1.0	12.80	690			8,832			

【Notes】

● Construction Equipment Rental Table/2016 P08-5

Standard Operating Hours Per Year: a = 400 h ／ Standard Operating Days Per Year: b = 100 days

Fuel Consumption Per Hour: c = 3.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝400/100×3.2 = 12.80 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝400/100＝4.00 h

Unit Price			Yen Conv.
MMK	USD	JPY	
29,368			2,443

Total	117,472			

Item: Tamper Operation

Spec.: 60～80kg　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
32,737			2,724

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-30	Tamper	60～80kg	day	1.00	1.0	1.00	13,037			13,037			
LBR-2	Skilled Labour		day	1.00	1.0	1.00	16,200			16,200			
MAT-6001	Gasoline		ℓ	5.00	1.0	5.00	700			3,500			

【Notes】

● Construction Equipment Rental Table/2016 P08-9

Hours Operating Per Day: a' = 5.00 h

Fuel Consumption Per Hour: c = 1 ℓ/h

Fuel Consumption Per Day: d＝a'×c＝5.00×1 = 5.00 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day: a' = 5.00

Unit Price			Yen Conv.
MMK	USD	JPY	
6,547			545

Total	32,737			

Item: Concrete Pump Truck Operation

Spec.: 90～110m3/h　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
855,000			71,136

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-31	Concrete Pump Truck	90～110m3/h	day	1.00	1.0	1.00	855,000			855,000			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	109.71	1.0	109.71							Included In Equipment Rent Unit Cost

【Notes】

● Construction Equipment Rental Table/2016 P09-3

Standard Operating Hours Per Year: a = 960 h ／ Standard Operating Days Per Year: b = 140 days

Electricity Consumption Per Hour: c = 16 ℓ/h

Electricity Consumption Per Day: d＝a／b×c＝960/140×16 = 109.71 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝960/140＝6.86 h

Unit Price			Yen Conv.
MMK	USD	JPY	
124,636			10,370

Total	855,000			

Item: Asphalt Finisher Operation

Spec.: 2.4～6.0m　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
644,800			53,647

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-32	Asphalt Finisher	2.4～6.0m	day	1.00	1.0	1.00	590,000			590,000			
LBR-6	Operator		day	1.00	1.0	1.00	20,300			20,300			
MAT-6002	Diesel		ℓ	50.00	1.0	50.00	690			34,500			

【Notes】

● Construction Equipment Rental Table/2016 P10-3

Standard Operating Hours Per Year: a = 400 h ／ Standard Operating Days Per Year: b = 80 days

Fuel Consumption Per Hour: c = 10 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝400/80×10 = 50.00 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝400/80＝5.00 h

Unit Price			Yen Conv.
MMK	USD	JPY	
128,960			10,729

Total	644,800			

Item: Road Marking Paint Preheater Operation

Spec.: Double Tank Thermoplastic / 200～350kg　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
45,256			3,765

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-34	Road Marking Paint Preheater	Double Tank Thermoplastic / 200～350kg	day	1.00	1.0	1.00	43,870			43,870			
MAT-6001	Gasoline		ℓ	1.98	1.0	1.98	700			1,386			

【Notes】

● Construction Equipment Rental Table/2016 P11-5

Standard Operating Hours Per Year: a = 530 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 0.41 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝530/110×0.41 = 1.98 ℓ

● Equipment Operation Unit Cost Per Hour

Hours Operating Per Day＝a／b＝530/110＝4.82 h

Unit Price			Yen Conv.
MMK	USD	JPY	
9,389			781

Total	45,256			

Item: Pin Grabber Coupler Backhoe

Spec.: 0.45m3 Unit: 6.27 h

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
40,718			3,388

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-38	Pin Grabber Coupler	0.7m	day	1.00	1.0	1.00	25,361			25,361			
ERN-5	Backhoe	0.45m3	day	1.00	1.0	1.00	190,120			190,120			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	57.71	1.0	57.71	690			39,820			

【Notes】

● Base Machine (MLIT Cost Estimate Standard for Civil Works/2015 P.388)

Base Machine: Backhoe 0.45m3

●Construction Equipment Rental Table/2016 P02-7

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 9.2 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×9.2 = 57.71 ℓ

Total										255,301			

Item: Vibro Hammer Operation

Spec.: 60W　　Unit: 1 day

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
677,700			56,385

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-41	Vibro Hammer	60W	day	1.00	1.0	1.00	257,212			257,212			
ERN-15	Crawler Crane	50～55t	day	1.00	1.0	1.00	380,240			380,240			
LBR-6	Operator		day	1.00	1.0	1.00							Included In Equipment Rent Unit Cost
MAT-6002	Diesel		ℓ	58.33	1.0	58.33	690			40,248			

【Notes】

● Base Machine (MLIT Cost Estimate Standard for Civil Works/2016 P.213)

Base Machine: Crawler Crane 50～55t (Standard Working Conditions)

●Construction Equipment Rental Table/2016 P04-1

Standard Operating Hours Per Year: a = 700 h ／ Standard Operating Days Per Year: b = 120 days

Fuel Consumption Per Hour: c = 10 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝700/120×10 = 58.33 ℓ

Total				677,700			

Item: Giant Breaker Operation

Spec.: 600～800kg　　Unit: 690.00 h

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
671			56

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-42	Giant Breaker	600～800kg	day	1.00	1.0	1.00	95,060			95,060			Base Machine not Included
ERN-7	Backhoe	0.8m3	day	1.00	1.0	1.00	298,760			298,760			Operator Included
LBR-6	Operator		day	1.00	1.0	1.00							
MAT-6002	Diesel		ℓ	100.36	1.0	100.36	690			69,248			

【Notes】

● Base Machine (MLIT Cost Estimate Standard for Civil Works/2013 P.29)

Base Machine: Backhoe 0.8m3

●Construction Equipment Rental Table/2016 P02-9

Standard Operating Hours Per Year: a = 690 h ／ Standard Operating Days Per Year: b = 110 days

Fuel Consumption Per Hour: c = 16 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝690/110×16 = 100.36 ℓ

Total										463,068			

Item: Platform Truck Operation

Spec.: 60t / Self Propelled　　Unit: 1 total days

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
192,973			16,055

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-44	Platform Truck	60t / Self Propelled	total days	1.00	1.0	1.00	110,096			110,096			
ERN-36	Generator	37/45kVA	total days	1.00	1.0	1.00	74,418			74,418			
MAT-6002	Diesel		ℓ	18.30	0.67	12.26	690			8,459			

【Notes】

● Electric Energy Consumption (MLIT Cost Estimate General Standard for Civil Works/2015 P. Ⅳ-7-⑨-4)

Generator Operation Time ⇒ 3 h per day ((1) / P. Ⅳ-7-⑨-4)

Total Days Rate＝1.5 (3－3－4 / P.789) ⇒ Correction Coefficient＝1／Total Days Rate＝1／1.5＝0.67

Generator Specification ⇒ 37/45kVA (Table 3.5 / P. Ⅳ-7-⑨-4)

●Construction Equipment Rental Table/2016 P15-9

Hours Operating Per Day: a' = 3.00 h

Fuel Consumption Per Hour: c = 6.1 ℓ/h

Fuel Consumption Per Day: d＝a／b×c＝-/100×6.1 = 18.30 ℓ

Total	192,973			

Item: Generator (For Construction Yard)

Spec.: 20/25kVA　　Unit: 1 month

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
1,791,660			149,066

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-35	Generator	20/25kVA	day	30.00	1.0	30.00	44,542			1,336,260			
MAT-6002	Diesel		ℓ	660.00	1.0	660.00	690			455,400			
Total										1,791,660			

【Notes】

● Construction Equipment Rental Table/2016 P15-9

Hours Operating Per Day: a' = 8.00 h、 Days Operation Per Month: b'＝25 days

Fuel Consumption Per Hour: c = 3.3 ℓ/h

Fuel Consumption Per Day: d＝a'×b'×c＝8.00×25×3.3 = 660.00 ℓ

Item: Generator (For Construction Yard)

Spec.: 100/125kVA　　Unit: 1 month

Source:: MLIT Cost Estimate Standard for Civil Works/2016 P.907

Unit Price			Yen Conv.
MMK	USD	JPY	
6,159,270			512,451

Code	Item	Specification	Unit	Quantity	Correction Coefficient		Unit Price			Subtotal			Remarks
					Cor. Coeff.	Cor. Qty	MMK	USD	JPY	MMK	USD	JPY	
ERN-37	Generator	100/125kVA	day	30.00	1.0	30.00	127,109			3,813,270			
MAT-6002	Diesel		ℓ	3,400.00	1.0	3,400.00	690			2,346,000			
Total										6,159,270			

【Notes】

● Construction Equipment Rental Table/2016 P15-9

Hours Operating Per Day: a' = 8.00 h、 Days Operation Per Month: b'＝25 days

Fuel Consumption Per Hour: c = 17 ℓ/h

Fuel Consumption Per Day: d＝a'×b'×c＝8.00×25×17 = 3,400.00 ℓ

Japanese Procurement Equipment & Material – Shipping Cost Calculation Table

【Conditions】 (Preparatory Survey for Grant Aid / Design and Cost Estimate Manual, 2016 P.58)
Condition ① Container 20' Capacity: Weght 18.6 t, Volume 20m3
Condition ② Container 40' Capacity: Weght 20.5 t, Volume 40m3

【Flyover Section】

● Construction Equipment (Foundation)

※Note: Round Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Extraction Jack	Pile Inner Diam. Φ1480mm	no	2.00	–	10.800	–	21.600	–	–	–	–	21.600	21.600
Reverse Circulation Drill	Φ3200mm	no	2.00	–	11.000	–	22.000	–	–	–	–	22.000	22.000
										Total	–		Total 43.600

※Note: Round Trip

Shipping Insurance	
Unit Cost (JPY)	Subtotal
12,500,000	25,000,000
25,300,000	50,600,000
Shipping Cost	959,200
Insurance	268,898
Insured Value	**76,828,098**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	43.600			22,000			959,200
Insurance Premium	%	0.35			76,828,098			268,898
Total								**1,228,098**

● Construction Equipment (Ground Improvement)

※Note: Round Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deep Layer Mixing Machine	2 axis・1200mm・Up to 20m	no	2.00	–	123.000	–	246.000	–	–	–	–	246.000	246.000
Cement Slurry Plant	20m3/h	no	2.00	–	17.000	–	34.000	–	–	–	–	34.000	34.000
										Total	–		Total 280.000

※Note: Round Trip

Shipping Insurance	
Unit Cost (JPY)	Subtotal
172,000,000	344,000,000
39,200,000	78,400,000
Shipping Cost	6,160,000
Insurance	1,505,228
Insured Value	**430,065,228**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	280.000			22,000			6,160,000
Insurance Premium	%	0.35			430,065,228			1,505,228
Total								**7,665,228**

●Preparation Works

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Rebar Net	Φ6 / 150x150mm	m2	10,000.00	0.0026	0.00311	26.00	31.100	–	–	–	26.000	31.100	31.100
Rebar Net	Φ13 / 200x200mm	t	100.000	0	1	–	100.000	–	–	–	–	100.000	100.000
Deformed Reinforcing Bar	D10～D13 (SD345)	t	20.000	0	1	–	20.000	–	–	–	–	20.000	20.000
										Total	–		Total 151.100

※Note: One Way Trip

Shipping Insurance	
Unit Cost (JPY)	Subtotal
265	2,650,000
104,000	10,400,000
58,000	1,160,000
Shipping Cost	3,324,200
Insurance	61,585
Insured Value	**17,595,785**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	151.100			22,000			3,324,200
Insurance Premium	%	0.35			17,595,785			61,585
Total								**3,385,785**

●Foundation

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	1.482	0	1	–	1.482	–	–	–	–	1.482	1.482
Deformed Reinforcing Bar	D16～D25 (SD345)	t	381.148	0	1	–	381.148	–	–	–	–	381.148	381.148
Deformed Reinforcing Bar	D29～D32 (SD345)	t	351.107	0	1	–	351.107	–	–	–	–	351.107	351.107
Steel Sheet	6×50	t	9.303	0	1	–	9.303	–	–	–	–	9.303	9.303
										Total	–		Total 743.040

※Note: One Way Trip

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	85,956
56,000	21,344,288
57,000	20,013,099
88,000	818,664
Shipping Cost	16,346,880
Insurance	205,852
Insured Value	**58,814,739**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	743.040			22,000			16,346,880
Insurance Premium	%	0.35			58,814,739			205,852
Total								**16,552,732**

●Substructure (Abutment)

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	3.038	0	1	–	3.038	–	–	–	–	3.038	3.038
Deformed Reinforcing Bar	D16～D25 (SD345)	t	29.252	0	1	–	29.252	–	–	–	–	29.252	29.252
Deformed Reinforcing Bar	D29～D32 (SD345)	t	11.799	0	1	–	11.799	–	–	–	–	11.799	11.799
										Total	–		Total 44.089

※Note: One Way Trip

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	176,204
56,000	1,638,112
57,000	672,543
Shipping Cost	969,958
Insurance	12,141
Insured Value	**3,468,958**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	44.089			22,000			969,958
Insurance Premium	%	0.35			3,468,958			12,141
Total								**982,099**

●Substructure (Pier)

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	6.136	0	1	-	6.136	-	-	-	-	6.136	6.136
Deformed Reinforcing Bar	D16～D25 (SD345)	t	197.129	0	1	-	197.129	-	-	-	-	197.129	197.129
Deformed Reinforcing Bar	D29～D32 (SD345)	t	229.341	0	1	-	229.341	-	-	-	-	229.341	229.341
									Total	**-**		**Total**	**432.606**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	355,888
56,000	11,039,224
57,000	13,072,437
Shipping Cost	9,517,332
Insurance	119,365
Insured Value	**34,104,246**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	-			809,000			
Bulk or RO/RO	F/T	432.606			22,000			9,517,332
Insurance Premium	%	0.35			34,104,246			119,365
Total								**9,636,697**

●Superstructure (PC I Girder Bridge)

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	106.933	0	1	-	106.933	-	-	-	-	106.933	106.933
Deformed Reinforcing Bar	D16～D25 (SD345)	t	482.928	0	1	-	482.928	-	-	-	-	482.928	482.928
PC Strand	4S15.2 (SWPR7BL)	t	6.729	0	1	-	6.729	-	-	-	-	6.729	6.729
PC Strand	7S15.2 (SWPR7BL)	t	47.768	0	1	-	47.768	-	-	-	-	47.768	47.768
Post Tension Duct	Φ65mm	m	6,133.19	4.00393E-06	0.00058	0.02	3.557	-	-	-	0.020	3.557	3.557
Ceramic Insert	M12	no	3,969	7.60533E-05	5.33333E-05	0.30	0.212	0.008	0.010	0.010	-	-	-
PC Strand Anchor Plate	70t	no	260	0	0	-	-	-	-	-	-	-	-
PC Strand Anchor Plate (Fix Side)	70t	no	260	0	0	-	-	-	-	-	-	-	-
PC Strand Anchor Plate	130t	no	400	0	0	-	-	-	-	-	-	-	-
Elastomeric Bearing Pad	92×470×520	no	60	0	0.084	-	5.040	-	0.246	0.246	-	-	-
Elastomeric Bearing Pad	112×520×520	no	20	0	0.104	-	2.080	-	0.101	0.101	-	-	-
Anchor Bar System	(F) Φ60×1220	no	12	0	0.027084	-	0.325	-	0.016	0.016	-	-	-
Anchor Bar System	(M) Φ60×1220	no	24	0	0.027084	-	0.650	-	0.032	0.032	-	-	-
Anchor Bar System	(M) Φ65×1320	no	6	0	0.03432	-	0.206	-	0.010	0.010	-	-	-
Anchor Bar System	(F) Φ75×1520	no	18	0	0.052744	-	0.949	-	0.046	0.046	-	-	-
Anchor Bar System	(F) Φ85×1720	no	6	0	0.07654	-	0.459	-	0.022	0.022	-	-	-
Anchor Bar System	(F) Φ90×1820	no	12	0	0.090818	-	1.090	-	0.053	0.053	-	-	-
Anchor Bar System	(F) Φ95×1920	no	6	0	1.06752	-	6.405	-	0.312	0.312	-	-	-
Anti Corrosion Protection	200×200×20	no	30	0	0.0015	-	0.045	-	0.002	0.002	-	-	-
Anti Corrosion Protection	200×300×20	no	54	0	0.0015	-	0.081	-	0.004	0.004	-	-	-
Expansion Joint (Metallic Type)	80mm	m	11.50	0	0.105	-	1.208	-	0.059	0.059	-	-	-
Expansion Joint (Metallic Type)	110mm	m	11.50	0	0.119	-	1.369	-	0.067	0.067	-	-	-
Slab Drain	Type-2 / Flexible Tube 1.5m	no	60	0.02284	0	1.37	-	0.034	-	0.034	-	-	-
									Total	**1.01**		**Total**	**647.915**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	6,202,114
56,000	27,043,968
331,000	2,227,299
331,000	15,811,208
448	2,747,669
286	1,135,083
16,000	4,160,000
22,900	5,954,000
16,000	6,400,000
191,000	11,460,000
254,000	5,080,000
83,200	998,400
125,100	3,002,400
151,300	907,800
181,200	3,261,600
268,000	1,608,000
310,200	3,722,400
368,700	2,212,200
2,100	63,000
3,200	172,800
300,670	3,457,705
396,426	4,558,899
19,105	1,146,300
Shipping Cost	15,071,220
Insurance	468,037
Insured Value	**128,872,102**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	1.010			809,000			817,090
Bulk or RO/RO	F/T	647.915			22,000			14,254,130
Insurance Premium	%	0.35			133,724,982			468,037
Total								**15,539,257**

●Superstructure (Steel Plate Girder Bridge)

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	13.432	0	1	-	13.432	-	-	-	-	13.432	13.432
Deformed Reinforcing Bar	D16～D25 (SD345)	t	102.019	0	1	-	102.019	-	-	-	-	102.019	102.019
Elastomeric Bearing Pad	134×470×470	no	10	0	0.4711	-	4.711	-	0.230	0.230	-	-	-
Elastomeric Bearing Pad	170×670×670	no	10	0	1.2606	-	12.606	-	0.615	0.615	-	-	-
Expansion Joint (Metallic Type)	160mm	m	11.50	0	0.21	-	2.415	-	0.118	0.118	-	-	-
Expansion Joint (Metallic Type)	230mm	m	11.50	0	0.253	-	2.910	-	0.142	0.142	-	-	-
Slab Drain	Type-2 / Flexible Tube 1.5m	no	12	0.02284	0	0.27	-	0.007	-	0.007	-	-	-
Paint	Zinc Rich Paint	kg	16.38	0	0.001	-	0.016	-	0.001	0.001	-	-	-
Paint	Fluorocarbon Resin Intermediate Paint	kg	47.73	0	0.001	-	0.048	-	0.002	0.002	-	-	-
Paint	Fluorocarbon Resin Finish Paint	kg	40.91	0	0.001	-	0.041	-	0.002	0.002	-	-	-
Paint	Modified Epoxy Resin Paint	kg	44.32	0	0.001	-	0.044	-	0.002	0.002	-	-	-
Paint	Ultra Thick Modified Epoxy Resin Paint	kg	399.30	0	0.001	-	0.399	-	0.019	0.019	-	-	-
Thinner	Zinc Rich Paint Thinner	ℓ	1.93	0.001	0.00085	-	0.002	-	-	-	-	-	-
Thinner	Epoxy Resin Paint Primer Thinner	ℓ	46.96	0.001	0.00085	0.05	0.040	0.001	0.002	0.002	-	-	-
Thinner	Fluorocarbon Resin Intermediate Paint Thinner	ℓ	5.62	0.001	0.00085	0.01	0.005	-	-	-	-	-	-
Thinner	Fluorocarbon Resin Finish Paint Thinner	ℓ	4.81	0.001	0.00085	-	0.004	-	-	-	-	-	-
Thinner	Modified Epoxy Resin Paint Thinner	ℓ	18.03	0.001	0.00085	0.02	0.015	0.001	0.001	0.001	-	-	-
									Total	**1.14**		**Total**	**115.451**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	779,056
56,000	5,713,064
1,175,000	11,750,000
2,750,000	27,500,000
596,252	6,856,898
831,478	9,561,997
19,105	229,260
940	15,397
1,180	56,321
3,910	159,958
1,010	44,763
1,270	507,111
375	724
355	16,671
355	1,995
390	1,876
355	6,401
Shipping Cost	3,462,182
Insurance	234,142
Insured Value	**66,897,816**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	1.140			809,000			922,260
Bulk or RO/RO	F/T	115.451			22,000			2,539,922
Insurance Premium	%	0.35			66,897,816			234,142
Total								**3,696,324**

●Superstructure (Steel Box Bridge)

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	20.777	0	1	–	20.777	–	–	–	–	20.777	20.777
Deformed Reinforcing Bar	D16～D25 (SD345)	t	159.465	0	1	–	159.465	–	–	–	–	159.465	159.465
Elastomeric Bearing Pad	219×770×720	no	4	0	1.7966	–	7.186	–	0.351	0.351	–	–	–
Elastomeric Bearing Pad	314×1070×1070	no	4	0	6.2021	–	24.808	–	1.210	1.210	–	–	–
Expansion Joint (Metallic Type)	320mm	m	23.00	0	0.313	–	7.199	–	0.351	0.351	–	–	–
Slab Drain	Type-2 / Flexible Tube 1.5m	no	8	0.02284	0	0.18	–	0.005	–	0.005	–	–	–
Paint	Zinc Rich Paint	kg	13.74	0	0.001	–	0.014	–	0.001	0.001	–	–	–
Paint	Fluorocarbon Resin Intermediate Paint	kg	63.25	0	0.001	–	0.063	–	0.003	0.003	–	–	–
Paint	Fluorocarbon Resin Finish Paint	kg	54.22	0	0.001	–	0.054	–	0.003	0.003	–	–	–
Paint	Modified Epoxy Resin Paint	kg	122.21	0	0.001	–	0.122	–	0.006	0.006	–	–	–
Paint	Ultra Thick Modified Epoxy Resin Paint	kg	1,031.70	0	0.001	–	1.032	–	0.050	0.050	–	–	–
Thinner	Zinc Rich Paint Thinner	ℓ	1.62	0.001	0.00085	–	0.001	–	–	–	–	–	–
Thinner	Epoxy Resin Paint Primer Thinner	ℓ	121.33	0.001	0.00085	0.12	0.103	0.003	0.005	0.005	–	–	–
Thinner	Fluorocarbon Resin Intermediate Paint Thinner	ℓ	7.45	0.001	0.00085	0.01	0.006	–	–	–	–	–	–
Thinner	Fluorocarbon Resin Finish Paint Thinner	ℓ	6.37	0.001	0.00085	0.01	0.005	–	–	–	–	–	–
Thinner	Modified Epoxy Resin Paint Thinner	ℓ	49.73	0.001	0.00085	0.05	0.042	0.001	0.002	0.002	–	–	–
									Total	**1.99**		**Total**	**180.242**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	1,205,066
56,000	8,930,040
3,900,000	15,600,000
11,561,000	46,244,000
1,040,739	23,936,997
19,105	152,840
940	12,916
1,180	74,635
3,910	212,000
1,010	123,432
1,270	1,310,259
375	608
355	43,072
355	2,645
390	2,484
355	17,654
Shipping Cost	5,575,234
Insurance	363,325
Insured Value	**103,807,207**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	1.990			809,000			1,609,910
Bulk or RO/RO	F/T	180.242			22,000			3,965,324
Insurance Premium	%	0.35			103,807,207			363,325
Total								**5,938,559**

●Approach Road

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	52.916	0	1	–	52.916	–	–	–	–	52.916	52.916
Deformed Reinforcing Bar	D16～D25 (SD345)	t	2.646	0	1	–	2.646	–	–	–	–	2.646	2.646
									Total	**–**		**Total**	**55.562**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	3,069,128
56,000	148,176
Shipping Cost	1,222,364
Insurance	14,536
Insured Value	**4,454,204**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	55.562			22,000			1,222,364
Insurance Premium	%	0.35			4,153,084			14,536
Total								**1,236,900**

● Mechanically Stabilized Earth Wall

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Bolt & Nut	M12×40	no	1,464	0	0.0000503	–	0.074	–	0.004	0.004	–	–	–
Permeable Anti-Sand Material	4.0×420	m	548.99	0	0	–	–	–	–	–	–	–	–
Horizontal Joint Material	60×500×20	m	548.99	0.0015	0	0.82	–	0.021	–	0.021	–	–	–
Metallic Strip	Width 60mm	m	7,700.00	0	0.001884	–	14.507	–	0.708	0.708	–	–	–
									Total	**0.73**		**Total**	

Shipping Insurance	
Unit Cost (JPY)	Subtotal
170	248,880
600	329,394
1,800	988,182
1,370	10,549,000
Shipping Cost	590,570
Insurance	44,627
Insured Value	**12,750,653**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	0.730			809,000			590,570
Bulk or RO/RO	F/T	–			22,000			
Insurance Premium	%	0.35			12,750,653			44,627
Total								**635,197**

【Side Road Section】

●Drainage Works

※Note: One Way Trip

※Note: One Way Trip

Item	Specification	Unit	Quantity	Unit Vol. (m3)	Unit Weight (t)	Load Vol. (m3)	L. Weight (t)	Container 40'			Bulk or RO/RO		
								Volume	Weight	Qty (no)	Volume	Weight	F/T
Deformed Reinforcing Bar	D10～D13 (SD345)	t	149.524	–	1.000	–	149.524	–	–	–	–	149.524	149.524
									Total	**–**		**Total**	**149.524**

Shipping Insurance	
Unit Cost (JPY)	Subtotal
58,000	8,672,392
Shipping Cost	3,289,528
Insurance	42,155
Insured Value	**12,004,075**

Item	Unit	Quantity	Unit Price			Subtotal		
			MMK	USD	JPY	MMK	USD	JPY
Container 40'	no	–			809,000			
Bulk or RO/RO	F/T	149.524			22,000			3,289,528
Insurance Premium	%	0.35			12,044,235			42,155
Total								**3,331,683**

7. Labour Unit Cost

Labour Unit Cost List

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
【Local Labour】								
LBR-1	Foreman		day	24,300			2,022	Minimum Cost (2 Sources)
LBR-2	Skilled Labour		day	16,200			1,348	Minimum Cost (2 Sources)
LBR-3	Unskilled Labour		day	13,500			1,123	Minimum Cost (2 Sources)
LBR-4	Scaffolder		day	20,300			1,689	Minimum Cost (2 Sources)
LBR-5	Rebar Worker		day	20,300			1,689	Minimum Cost (2 Sources)
LBR-6	Operator		day	20,300			1,689	Minimum Cost (4 Sources)
LBR-7	Truck Driver		day	17,500			1,456	Minimum Cost (3 Sources)
LBR-8	Form Worker		day	20,300			1,689	Minimum Cost (2 Sources)
LBR-9	Road Block Installer		day	20,300			1,689	Minimum Cost (2 Sources)
LBR-10	Welder		day	21,600			1,797	Minimum Cost (3 Sources)
LBR-11	Electrician		day	24,300			2,022	Minimum Cost (2 Sources)
LBR-12	Precast Block Installer		day	17,500			1,456	Minimum Cost (2 Sources)
LBR-13	Waterproofing Applicator		day	20,300			1,689	Minimum Cost (2 Sources)
LBR-14	Foreman for Bridges		day	49,000			4,077	Minimum Cost (1 Source)
LBR-15	Skilled Labour for Bridges		day	32,667			2,718	
LBR-16	Coating Applicator for Bridges		day	22,400			1,864	Minimum Cost (1 Source)
LBR-101	Civil Engineer	15 years of experience	month	2,028,000			168,730	Minimum Cost (2 Sources)
LBR-102	Civil Engineer	10 years of experience	month	1,550,000			128,960	Minimum Cost (2 Sources)
LBR-103	Surveyor		month	1,090,000			90,688	Minimum Cost (2 Sources)
LBR-104	Assistant Surveyor		month	520,000			43,264	Minimum Cost (2 Sources)
LBR-105	Drafter	5 years of experience	month	546,000			45,427	Minimum Cost (3 Sources)
LBR-106	Accountant		month	743,000			61,818	Minimum Cost (3 Sources)
LBR-107	Clerk		month	490,000			40,768	Minimum Cost (3 Sources)
LBR-108	Security Guard		month	266,000			22,131	Minimum Cost (3 Sources)
LBR-109	Office Boy		month	338,000			28,122	Minimum Cost (2 Sources)
LBR-110	Flagman		month	297,000			24,710	Minimum Cost (2 Sources)
【Japanese Labour】								
SPC-1	Month Salary	2nd Rank	month			1,024,000	1,024,000	JICA Consultant Rate 2017
SPC-2	Month Salary	3rd Rank	month			910,000	910,000	JICA Consultant Rate 2017
SPC-3	Month Salary	4th Rank	month			744,000	744,000	JICA Consultant Rate 2017
SPC-4	Overseas Assignment Allowance	3rd Rank	month			327,600	327,600	JICA Cost Estimate & Design Manual/2016 P.71/P.93
SPC-5	Overseas Assignment Allowance	4th Rank	month			267,840	267,840	JICA Cost Estimate & Design Manual/2016 P.71/P.93
SPC-6	Travel Allowance	2nd Rank	day			4,500	4,500	JICA Cost Estimate & Design Manual/2016 P.81
SPC-7	Travel Allowance	3rd Rank	day			3,800	3,800	JICA Cost Estimate & Design Manual/2016 P.81
SPC-8	Accommodation Fee	2nd Rank	day			13,500	13,500	JICA Cost Estimate & Design Manual/2016 P.82
SPC-9	Accommodation Fee	3rd Rank	day			11,600	11,600	JICA Cost Estimate & Design Manual/2016 P.82
SKW-1	Heavy Equipment Operator		day			25,774	25,774	Civil Works Labour Rate Reference (Tokyo) MLIT/2017
SKW-2	Foreman		day			27,075	27,075	Civil Works Labour Rate Reference (Tokyo) MLIT/2017

8. Material Unit Cost

Material Unit Cost List

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
	【Raw Steel Products】							
MAT-1001	Deformed Reinforcing Bar	D10～D13 (SD345)	t			58,000	58,000	Construction Material Rates Apr/2017 P.16
MAT-1002	Deformed Reinforcing Bar	D16～D25 (SD345)	t			56,000	56,000	Construction Material Rates Apr/2017 P.16
MAT-1003	Deformed Reinforcing Bar	D29～D32 (SD345)	t			57,000	57,000	Construction Material Rates Apr/2017 P.16
MAT-1004	PC Strand	4S15.2 (SWPR7BL)	t			331,000	331,000	Construction Material Rates Apr/2017 P.333
MAT-1005	PC Strand	7S15.2 (SWPR7BL)	t			331,000	331,000	Construction Material Rates Apr/2017 P.333
MAT-1006	Post Tension Duct	Φ65mm	m			448	448	Construction Material Rates Apr/2017 P.335
MAT-1007	Rebar Net	Φ6 / 150x150mm	m2			265	265	Construction Material Rates Apr/2017 P.70
MAT-1008	Rebar Net	Φ13 / 200x200mm	t			104,000	104,000	Construction Material Rates Apr/2017 P.71
MAT-1009	Steel Sheet	6×50	t			88,000	88,000	Construction Material Rates Apr/2017 P.21
MAT-1010	Steel Scrap	Heavy H4 Class	t	-198,317			-16,500	Construction Material Rates Apr/2017 P.776
	【Manufactured Steel Products】							
MAT-2001	Anchor Bolt	M12×100	no			84	84	Construction Material Rates Apr/2017 P.60
MAT-2002	Anchor Bolt	M16×100	no			205	205	Construction Material Rates Apr/2017 P.60
MAT-2003	Hexagonal Bolt	M12×35	no			9	9	※Estimated
MAT-2004	Hexagonal Bolt	M12×40	no			10	10	Construction Material Rates Apr/2017 P.63
MAT-2005	Hexagonal Bolt	M12×45	no			11	11	Construction Material Rates Apr/2017 P.63
MAT-2006	Washer	M12	no			4	4	Construction Material Rates Apr/2017 P.64
MAT-2007	Ceramic Insert	M12	no			286	286	Construction Material Rates Apr/2017 P.67
MAT-2008	PC Strand Anchor Plate	70t	no			16,000	16,000	Construction Material Rates Apr/2017 P.334
MAT-2009	PC Strand Anchor Plate (Fix Side)	70t	no			22,900	22,900	Construction Material Rates Apr/2017 P.334
MAT-2010	PC Strand Anchor Plate	130t	no			16,000	16,000	Construction Material Rates Apr/2017 P.334
MAT-2011	Elastomeric Bearing Pad	134×470×470	no			1,175,000	1,175,000	Minimum Cost (3 Sources)
MAT-2012	Elastomeric Bearing Pad	170×670×670	no			2,750,000	2,750,000	Minimum Cost (3 Sources)
MAT-2013	Elastomeric Bearing Pad	219×770×720	no			3,900,000	3,900,000	Minimum Cost (3 Sources)
MAT-2014	Elastomeric Bearing Pad	314×1070×1070	no			11,561,000	11,561,000	Minimum Cost (3 Sources)
MAT-2015	Elastomeric Bearing Pad	92×470×520	no			191,000	191,000	Minimum Cost (3 Sources)
MAT-2016	Elastomeric Bearing Pad	112×520×520	no			254,000	254,000	Minimum Cost (3 Sources)
MAT-2017	Anchor Bar System	(F) Φ60×1220	no			83,200	83,200	Minimum Cost (3 Sources)
MAT-2018	Anchor Bar System	(M) Φ60×1220	no			125,100	125,100	Minimum Cost (3 Sources)
MAT-2019	Anchor Bar System	(M) Φ65×1320	no			151,300	151,300	Minimum Cost (3 Sources)
MAT-2020	Anchor Bar System	(F) Φ75×1520	no			181,200	181,200	Minimum Cost (3 Sources)
MAT-2021	Anchor Bar System	(F) Φ85×1720	no			268,000	268,000	Minimum Cost (3 Sources)
MAT-2022	Anchor Bar System	(F) Φ90×1820	no			310,200	310,200	Minimum Cost (3 Sources)
MAT-2023	Anchor Bar System	(F) Φ95×1920	no			368,700	368,700	Minimum Cost (3 Sources)
MAT-2024	Anti Corrosion Protection	200×200×20	no			2,100	2,100	Minimum Cost (3 Sources)
MAT-2025	Anti Corrosion Protection	200×300×20	no			3,200	3,200	Minimum Cost (3 Sources)
MAT-2026	Expansion Joint (Metallic Type)	80mm	m			300,670	300,670	Minimum Cost (3 Sources)
MAT-2027	Expansion Joint (Metallic Type)	110mm	m			396,426	396,426	Minimum Cost (3 Sources)
MAT-2028	Expansion Joint (Metallic Type)	160mm	m			596,252	596,252	Minimum Cost (3 Sources)
MAT-2029	Expansion Joint (Metallic Type)	230mm	m			831,478	831,478	Minimum Cost (3 Sources)
MAT-2030	Expansion Joint (Metallic Type)	320mm	m			1,040,739	1,040,739	Minimum Cost (3 Sources)
MAT-2031	Box Beam	Gb-Bm-2B-2	m	159,255			13,250	Minimum Cost (1 Source)
MAT-2032	Balustrade	For Concrete Base (H=1100)	m	102,764			8,550	Minimum Cost (1 Source)
MAT-2033	Fence (Metallic Net Type)	Φ3.2×50mm (H=1800)	m	77,764			6,470	Minimum Cost (1 Source)
MAT-2034	Gate (Metallic Net Type)	1800×4000	no	4,723,558			393,000	Minimum Cost (1 Source)
	【Cement & Aggregates】							
MAT-3001	Concrete	18 N/mm2	m3	84,286			7,013	Minimum Cost (2 Sources)
MAT-3002	Concrete	24 N/mm2	m3	88,762			7,385	Minimum Cost (2 Sources)
MAT-3003	Concrete	30 N/mm2	m3	97,810			8,138	Minimum Cost (2 Sources)
MAT-3004	Concrete	40 N/mm2	m3	110,286			9,176	Minimum Cost (2 Sources)
MAT-3005	Cement	Ordinary Portland (OPC)	t	106,053			8,824	Minimum Cost (2 Sources)
MAT-3006	Water	For Concrete	ℓ	100			8	※ Provisional Unit Cost
MAT-3007	Sand		m3	3,180			265	Minimum Cost (1 Source)
MAT-3008	Crushed stone	C-40	m3	46,500			3,869	Minimum Cost (1 Source)
MAT-3009	Non-shrink Mortar		kg	1,502			125	Minimum Cost (1 Source)
MAT-3010	Backfilling material		m3	15,000			1,248	Minimum Cost (1 Source)
MAT-3011	Roadbed material	C-40	m3	46,500			3,869	Minimum Cost (1 Source)
	【Asphalt Materials】							
MAT-5001	Asphalt Mix	AC14	t	78,500			6,531	Minimum Cost (1 Source)
MAT-5002	Prime Coat		ℓ	700			58	Minimum Cost (1 Source)
MAT-5003	Tack Coat		ℓ	700			58	Minimum Cost (1 Source)
	【Fuel & Temporary Material】							
MAT-6001	Gasoline		ℓ	700			58	Minimum Cost (3 Sources)
MAT-6002	Diesel		ℓ	690			57	Minimum Cost (3 Sources)
MAT-6003	Electricity		kW	2				
MAT-6004	Temporary Fence	Wooden	m	59,977			4,990	Construction Material Rates Jul/2016 P.168
MAT-6005	H Pile	For Temp. Retaining Wall	t	814,800			67,791	Minimum Cost (1 Source)
MAT-6006	Lagging Plate		m2	15,024			1,250	Construction Material Rates Jul/2016 P.150
MAT-6007	Rail	30kg/m	m	57,692			4,800	Construction Material Rates Jul/2016 P.2
	【Others】							
MAT-7001	PC Precast Panel		no	289,865			24,117	Minimum Cost (1 Source)
MAT-7002	Geotextile	Width 60mm	m2	41,466			3,450	Construction Material Rates Apr/2017 P.383
MAT-7003	Asphalt Waterproof Sheet		m2	44,952			3,740	Construction Material Rates Apr/2017 P.440
MAT-7004	Grating Cover	t=50mm	m2	791,667			65,867	Construction Material Rates Apr/2017 P.275
MAT-7005	Grating Cover	t=75mm	m2	1,187,500			98,800	Construction Material Rates Apr/2017 P.275
MAT-7006	RCC Hume Pipe	300mm	m	21,300			1,772	Minimum Cost (2 Sources)
MAT-7007	PVC Pipe	200mm	m	35,156			2,925	Construction Material Rates Jul/2016 P.656
MAT-7008	PVC Pipe	200mm / Elbow 45°	no	90,024			7,490	Construction Material Rates Apr/2017 P.286
MAT-7009	PVC Pipe	200mm / Elbow 90°	no	76,923			6,400	Construction Material Rates Apr/2017 P.286
MAT-7010	PVC Pipe・Special Fittings	T1	no	1,130,141			94,028	Minimum Cost (1 Source)
MAT-7011	PVC Pipe・Special Fittings	T2	no	1,107,938			92,180	Minimum Cost (1 Source)
MAT-7012	PVC Pipe・Special Fittings	T3	no	966,747			80,433	Minimum Cost (1 Source)
MAT-7013	PVC Pipe・Special Fittings	T4	no	827,158			68,820	Minimum Cost (1 Source)
MAT-7014	PVC Pipe・Special Fittings	T5	no	1,720,260			143,126	Minimum Cost (1 Source)
MAT-7015	PVC Pipe・Special Fittings	T11	no	755,768			62,880	Minimum Cost (1 Source)
MAT-7016	PVC Pipe・Special Fittings	T12	no	873,153			72,646	Minimum Cost (1 Source)

Material Unit Cost List

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
MAT-7017	PVC Pipe･Special Fittings	T13	no	1,038,137			86,373	Minimum Cost (1 Source)
MAT-7018	PVC Pipe･Special Fittings	T14	no	1,461,683			121,612	Minimum Cost (1 Source)
MAT-7019	PVC Pipe･Special Fittings	T15	no	1,764,680			146,821	Minimum Cost (1 Source)
MAT-7020	PVC Pipe･Special Fittings	T16	no	1,366,515			113,694	Minimum Cost (1 Source)
MAT-7021	PVC Pipe･Special Fittings	T17	no	896,959			74,627	Minimum Cost (1 Source)
MAT-7022	PVC Pipe･Special Fittings	T18	no	1,177,739			97,988	Minimum Cost (1 Source)
MAT-7023	PVC Pipe･Special Fittings	T19	no	966,747			80,433	Minimum Cost (1 Source)
MAT-7024	PVC Pipe･Special Fittings	T20	no	1,203,120			100,100	Minimum Cost (1 Source)
MAT-7025	PVC Pipe･Special Fittings	L1	no	827,158			68,820	Minimum Cost (1 Source)
MAT-7026	PVC Pipe･Special Fittings	L2	no	942,954			78,454	Minimum Cost (1 Source)
MAT-7027	PVC Pipe･Special Fittings	L3	no	1,342,709			111,713	Minimum Cost (1 Source)
MAT-7028	PVC Pipe･Special Fittings	EX	no	643,029			53,500	Minimum Cost (1 Source)
MAT-7029	PVC Pipe･Special Fittings	EX-S	no	643,029			53,500	Minimum Cost (1 Source)
MAT-7030	Slab Drain	Type-2 / Flexible Tube 1.5m	no			19,105	19,105	Construction Material Rates Jul/2016 P.332
MAT-7031	Interlocking Block	t=6cm	m2	31,250			2,600	Construction Material Rates Jul/2016 P.198
MAT-7032	Road Mark Paint	JIS K 5665	kg	1,923			160	Construction Material Rates Jul/2016 P.198
MAT-7033	Glass Beads	JIS R 3301	kg	1,803			150	Construction Material Rates Jul/2016 P.198
MAT-7034	Steel Post	Φ60.5mm / 4.5m	no	119,712			9,960	Construction Material Rates Jul/2016 P.227
MAT-7035	Traffic Regulatory Sign	Φ600mm	no	256,010			21,300	Construction Material Rates Jul/2016 P.227
MAT-7036	Traffic Warning Sign	600×600	no	501,923			41,760	Construction Material Rates Jul/2016 P.227
MAT-7037	Bridge Nameplate	1800×1200	no	2,076,923			172,800	Minimum Cost (1 Source)
MAT-7038	Precast Panel (Mec. Stab. E. Wall)	14cm	m2	256,920			21,376	Minimum Cost (1 Source)
MAT-7039	Joint Seal for RC Plates	10×15mm	m	4,688			390	Construction Material Rates Apr/2017 P.329
MAT-7040	Bolt & Nut	M12×40	no			170	170	Construction Material Rates Jul/2016 P.348
MAT-7041	Permeable Anti-Sand Material	4.0×420	m			600	600	Construction Material Rates Jul/2016 P.348
MAT-7042	Horizontal Joint Material	60×500×20	m			1,800	1,800	Construction Material Rates Jul/2016 P.348
MAT-7043	Metallic Strip	Width 60mm	m			1,370	1,370	Construction Material Rates Jul/2016 P.348
MAT-7044	Paint	Zinc Rich Paint	kg			940	940	Construction Material Rates Apr/2017 P.195
MAT-7045	Paint	Fluorocarbon Resin Intermediate Paint	kg			1,180	1,180	Construction Material Rates Apr/2017 P.196
MAT-7046	Paint	Fluorocarbon Resin Finish Paint	kg			3,910	3,910	Construction Material Rates Apr/2017 P.196
MAT-7047	Paint	Modified Epoxy Resin Paint	kg			1,010	1,010	Construction Material Rates Apr/2017 P.195
MAT-7048	Paint	Ultra Thick Modified Epoxy Resin Paint	kg			1,270	1,270	Construction Material Rates Apr/2017 P.195
MAT-7049	Thinner	Zinc Rich Paint Thinner	ℓ			375	375	Construction Material Rates Apr/2017 P.198
MAT-7050	Thinner	Epoxy Resin Paint Primer Thinner	ℓ			355	355	Construction Material Rates Apr/2017 P.198
MAT-7051	Thinner	Fluorocarbon Resin Intermediate Paint Thinner	ℓ			355	355	Construction Material Rates Apr/2017 P.198
MAT-7052	Thinner	Fluorocarbon Resin Finish Paint Thinner	ℓ			390	390	Construction Material Rates Apr/2017 P.198
MAT-7053	Thinner	Modified Epoxy Resin Paint Thinner	ℓ			355	355	Construction Material Rates Apr/2017 P.198

9. Constr. Equip. Rent Unit Cost

Construction Equipment Rentl Unit Cost List

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
ERN-1	Bulldozer	15t	day	271,600			22,597	Minimum Cost (4 Sources)
ERN-2	Bulldozer	21t	day	353,080			29,376	Minimum Cost (4 Sources)
ERN-3	Bulldozer	7t (Swamp)	day	543,200			45,194	Minimum Cost (3 Sources)
ERN-4	Backhoe	0.28m3	day	135,800			11,299	Minimum Cost (3 Sources)
ERN-5	Backhoe	0.45m3	day	190,120			15,818	Minimum Cost (3 Sources)
ERN-6	Backhoe	0.5m3	day	244,440			20,337	Minimum Cost (3 Sources)
ERN-7	Backhoe	0.8m3	day	298,760			24,857	Minimum Cost (3 Sources)
ERN-8	Backhoe	0.5m3 / Lifting Capacity 2.9t	day	325,920			27,117	Minimum Cost (2 Sources)
ERN-9	Backhoe	0.8m3 / Lifting Capacity 2.9t	day	298,760			24,857	Minimum Cost (3 Sources)
ERN-10	Dump Truck	10t	day	149,380			12,428	Minimum Cost (3 Sources)
ERN-11	Truck	2t	day	282,464			23,501	Minimum Cost (1 Source)
ERN-12	Truck	3～3.5t	day	282,464			23,501	Minimum Cost (1 Source)
ERN-13	Wheel Crane	25t	day	244,440			20,337	Minimum Cost (4 Sources)
ERN-14	Crawler Crane	40～45t	day	353,080			29,376	Minimum Cost (3 Sources)
ERN-15	Crawler Crane	50～55t	day	380,240			31,636	Minimum Cost (3 Sources)
ERN-16	Crawler Crane	100t	day	814,800			67,791	Minimum Cost (3 Sources)
ERN-17	Crawler Crane	200t	day	2,064,160			171,738	Minimum Cost (2 Sources)
ERN-18	Truck Crane	16t	day	190,120			15,818	Minimum Cost (3 Sources)
ERN-19	Rough Terrain Crane	16t	day	190,120			15,818	Minimum Cost (4 Sources)
ERN-20	Rough Terrain Crane	25t	day	244,440			20,337	Minimum Cost (4 Sources)
ERN-21	Extraction Jack	Pile Inner Diam. Φ1480mm	day					Construction Equipment Rental Table/2016 P05-15
ERN-22	Reverse Circulation Drill	Φ3200mm	day			19,601	19,601	Construction Equipment Rental Table/2016 P05-19
ERN-23	Deep Layer Mixing Machine	2 axis・1200mm・Up to 20m	day			107,800	107,800	Construction Equipment Rental Table/2016 P05-33
ERN-24	Cement Slurry Plant	20m3/h	day			28,201	28,201	Construction Equipment Rental Table/2016 P05-33
ERN-25	Motor Grader	3.1m	day	353,080			29,376	Minimum Cost (3 Sources)
ERN-26	Road Roller	10～12t	day	244,440			20,337	Minimum Cost (3 Sources)
ERN-27	Pneumatic Tire Roller	8～20t	day	298,760			24,857	Minimum Cost (3 Sources)
ERN-28	Vibration Roller	Hand Guide 0.8～1.1t	day	54,320			4,519	Minimum Cost (1 Source)
ERN-29	Vibration Roller	Tandem 3～4t	day	108,640			9,039	Minimum Cost (2 Sources)
ERN-30	Tamper	60～80kg	day	13,037			1,085	Minimum Cost (1 Source)
ERN-31	Concrete Pump Truck	90～110m3/h	day	855,000			71,136	Minimum Cost (2 Sources)
ERN-32	Asphalt Finisher	2.4～6.0m	day	590,000			49,088	Minimum Cost (1 Source)
ERN-33	Line Marker	Hopper 80～130kg	day	23,918			1,990	Construction Equipment Rental Table/2016 P11-3
ERN-34	Road Marking Paint Preheater	Double Tank Thermoplastic / 200～350kg	day	43,870			3,650	Construction Equipment Rental Table/2016 P11-5
ERN-35	Generator	20/25kVA	day	44,542			3,706	Minimum Cost (2 Sources)
ERN-36	Generator	37/45kVA	day	74,418			6,192	Minimum Cost (2 Sources)
ERN-37	Generator	100/125kVA	day	127,109			10,575	Minimum Cost (2 Sources)
ERN-38	Pin Grabber Coupler	0.7m	day	25,361			2,110	Construction Equipment Rental Table/2016 P02-25
ERN-39	Gantry crane	3t	day	56,971			4,740	Construction Equipment Rental Table/2016 P04-17
ERN-40	Hanging Hoist	3t / Electric type	day	10,505			874	Construction Equipment Rental Table/2016 P04-17
ERN-41	Vibro Hammer	60W	day	257,212			21,400	Construction Equipment Rental Table/2016 P05-1
ERN-42	Giant Breaker	600～800kg	day	95,060			7,909	Minimum Cost (1 Source)
ERN-43	Bent		t × days	8,474			705	Construction Equipment Rental Table/2016 P18-1
ERN-44	Platform Truck	60t / Self Propelled	total days	110,096			9,160	Construction Equipment Rental Table/2016 P18-11
ERN-45	Temporary Tightening Bolt	M22 × 90	100 × total days	577			48	Construction Equipment Rental Table/2016 P18-25
ERN-46	Drift Pin	Φ24.5 × 150	100 × total days	1,322			110	Construction Equipment Rental Table/2016 P18-25

10. Others Unit Cost

Other Unit Cost

Exchange Rate	1Main (USD)＝113.11円	1Local (MMK)＝0.0832円

Code	Item	Specification	Unit	Unit Price			Yen Conv.	Item Conditions
				Local (MMK)	Main (USD)	Yen (JPY)		
	【Consultant】							
QTN-1	Project Sign Board	1.8x3.6m	no	2,100,000			174,720	Double A Signboard & Home Decoration
QTN-2	Project Sign Board	0.9x1.8m	no	1,200,000			99,840	Double A Signboard & Home Decoration
QTN-3	Supervision Vehicle	Driver & Fuel Included	month	2,380,952			198,095	Minimum Cost (1 Source)
	【Air Ticket】							
QTN-4	Keisei Skyliner	Tokyo Station⇔Narita Air. Term. 1 Station	round trip			5,260	5,260	Minimum Cost (1 Source)
QTN-5	Air Ticket	Business Class / 6 months valid	round trip			529,228	529,228	Minimum Cost (1 Source)
QTN-6	Air Ticket	Economic Class / 2 months valid	round trip			185,878	185,878	Minimum Cost (1 Source)
QTN-7	Air Ticket	Economic Class / 12 months valid	round trip			485,128	485,128	Minimum Cost (1 Source)
	【Freight】							
QTN-7	Container 40'	Japan ～ Project Site	no			809,000	809,000	Minimum Cost (1 Source)
QTN-8	Bulk or RO/RO	Japan ～ Project Site	F/T			22,000	22,000	Minimum Cost (1 Source)
	【Others】							
QTN-9	Waterwell	30 ℓ/s	no	16,525,502			1,374,922	Minimum Cost (1 Source)
QTN-10	Waterwell	60 ℓ/s	no	18,902,002			1,572,647	Minimum Cost (1 Source)
QTN-11	Steel Girder Fabrication	Plate Girder	t			451,585	451,585	Average Cost (3 Sources)
QTN-12	Steel Girder Fabrication	Box Girder	t			494,348	494,348	Average Cost (3 Sources)
QTN-13	Test Cost	Geotechnical Test (Foundation)	P.Sum	111,776,980			9,299,845	Minimum Cost (1 Source)
QTN-14	Test Cost	Geotechnical Test (Approach Road)	P.Sum	17,834,166			1,483,803	Minimum Cost (1 Source)
QTN-15	Test Cost	Geotechnical Test (AF.1 Side)	P.Sum	8,917,076			741,901	Minimum Cost (1 Source)
QTN-16	Test Cost	Static Loading Test	times	49,424,410			4,112,111	Minimum Cost (1 Source)
QTN-17	Test Cost	Ultrasonic Test	times	645,316			53,690	Average Cost (2 Sources)
	【Standard Values】							
STD-1	Erection Tools	Assembling & Bolt Tightening Tools	total days	113,822			9,470	MLIT Cost Estimate General Standard for Civil Works/2015 P.Ⅳ-7-③-17
STD-2	Erection Tools	For PC Girder Bridge	total days	66,587			5,540	MLIT Cost Estimate General Standard for Civil Works/2015 P.Ⅳ-7-⑨-4
STD-3	Girder Moving Equipments (40t)	Depreciation	total days	234,375			19,500	Cost Estimation for Bridge Erection Works/2015 P.582
STD-4	Metallic Formwork	Depreciation	m2×days	4,724			393	Cost Estimation for Bridge Erection Works/2015 P.646
STD-5	Fabrication Support	Depreciation	m×days	1,226			102	Cost Estimation for Bridge Erection Works/2015 P.646
STD-6	Prestressing Jack	1,300kN (130t)	total days	60,096			5,000	Cost Estimation for Bridge Erection Works/2015 P.668
STD-7	Licence Fee	CDM－Mega Method	m3			30	30	CDM Research Association Cost Estimation Manual/2012 P.44