



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

THE DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

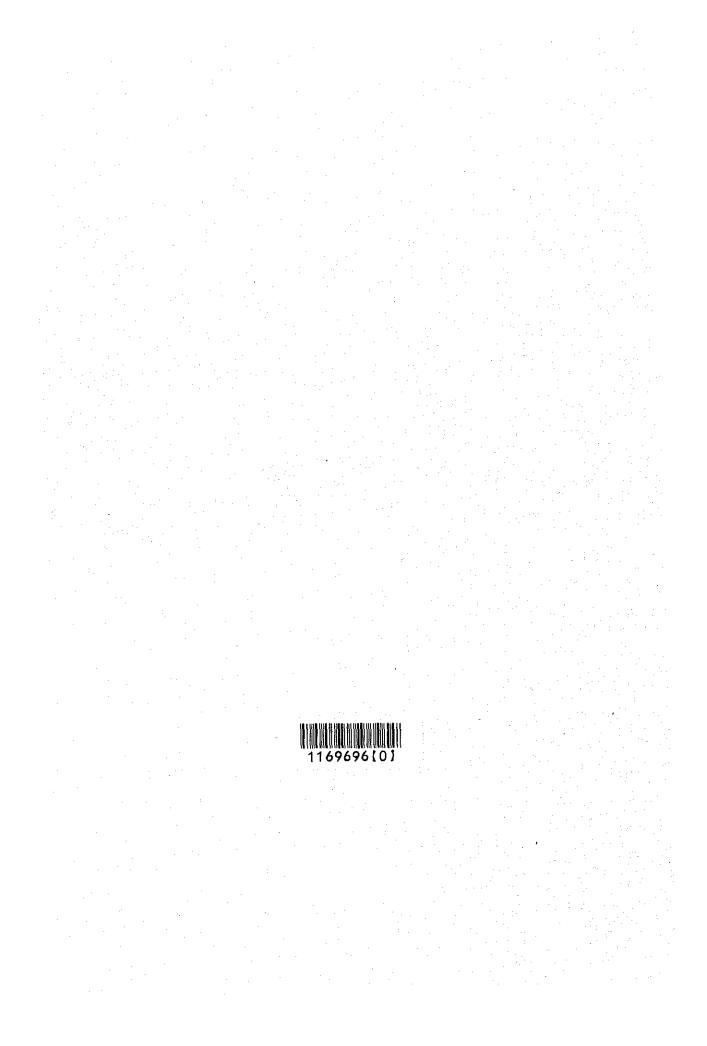
FINAL REPORT

COST ESTIMATE REPORT

Civil Works

OCTOBER 2002

NIPPON KOEI CO., LTD.



COST ESTIMATE REPORT THE DETAILED DESIGN STUDY

ON

LA UNION PORT DEVELOPMENT PROJECT

CIVIL WORK

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1. GENERAL

1, General

1.1 Basis of Cost Estimation

1.1.1 General

This report presents the Project cost estimate. The unit rates and prices for labor, materials, plant and equipment used in the cost estimation are based on the current price level as of June 2002.

1.1.2 Conditions for Cost Estimation

(1) Exchange Rate

The exchange rate used in the estimation of the Project cost is US\$ 1= ¥ 120.00 and US\$ 1= ¢ 8.75

(2) Local Currency Portion

The local currency portion includes the following items;

- a) The cost of local materials, equipment and labor for both the permanent and temporary work of the Project ;
- b) The cost of local transportation, custom clearance, dealer's commissions, handling charges of agent, temporary storage, etc for imported materials and equipment; and
- c) The Contractor's overhead and profit.

Foreign Currency Portion

The foreign currency portion includes the following items;

a)The cost of imported materials, equipment and foreign expatriates.

b)The cost of overseas transportation of imported materials and equipment

(dealer's commissions, handling charges, etc.)

c)The Contractor's overhead and profit.

Taxes

(3)

(4)

The value added tax (IVA) and the municipal tax imposed in accordance with the laws and regulations of the Government of the Republic of El Salvador are not included in the Project cost estimate.

1.1.3 Unit Rates

The availability and cost of local materials and labor at site such as stone, gravel, reclamation material, cement, skilled and skilled workers are investigated through interviews and queries from local suppliers as well as authorities concerned.

Major machinery, especially marine floating equipment is not available in the country. Hence, the required machinery for the Project is considered to be imported from abroad and their cost including mobilization/demobilization are duly incorporated in the Project cost estimate.

1.1.4 Reference Information

In preparing the unit rate analysis, the estimated costs or unit rates applied to the projects being implemented in the country and current prices of international contracts are considered as reference prices in the estimate.

1.1.5 Contractor's Working Area

A 60 ha area within the CEPA premises is considered to be made available free of charge to the Contractor.

2. BASIC DATA FOR UNIT COST ANALYSIS

2. BASIC DATA FOR UNIT COST ANALYSIS

2. BASIC DATA FOR UNIT COST ANALYSIS

Based upon the collected data and with reference to the current costs and prices, basic data for cost estimate have been set down as summarized below for the cost estimators in each section of the works in order to maintain consistency in estimation throughout.

- 2.1 Labor Wages Please refer to Appendix 1.
- 2.2 Basic Construction Material Costs Please refer to Appendix 2.
- 2.3 Construction Machine Operation Cost Please refer to Appendix 3.
- 2.4 Indirect and Overhead Ratios

Description Civil works Indirect and Overhead 15%

3. COST ESTIMATION FOR BILL ITEMS

PAY		DESCRIPTION	UNIT	QUANTITY	(YE	CURRENCY N)	LOCAL CUI (US\$)	TOTAL AMOUNT
1A 1B 1C 1D	100 GENERAL REQUIREMENTS Mobilization and Demobiliza Temporary Facilities Facilities for the Employer Demolition and Clearance of Provisional Sums	and the Engineer	L.S L.S L.S L.S L.S	1 1 1 1 1	UNIT COST 313,704,130 15,383,623 0 2,775,774 36,000,000	AMOUNT 313,704,130 15,383,623 0 2,775,774 36,000,000	UNIT COST 781,756 147,839 1,407,549 48,189 50,000	AMOUNT 781,756 147,839 1,407,549 48,189 50,000	(YEN) 407,514,8 33,124,3 168,905,8 8,558,4 42,000,0

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PAY			QUANTITY	FOREIGN ((YEI	() ()	LOCAL CI (US	\$)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
1A01	ILIZATION AND DEMOBILIZATION Mobilization of dredging fleet and associated equipment for dredging work	L.S	1.00	83,875,250	83,875,250	214, 415	214,415	109,605,0
A02 A03	Demobilization for Item 1A01 Mobilization of other construction plant and equipment Demobilization for Item 1A03	L.S L.S L.S	1.00 1.00 1.00	81,085,350	83,875,250 81,085,350 64,868,280	214,415 196,070 156,856	214,415 196,070 156,856	
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PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN CURRENCY (YEN)	LOCAL CURRENCY (US\$)	TOTAL AMOUNT IN
ITEM				UNIT COST AMOUNT	UNIT COST AMOUNT	(YEN)
1B01	FORARY FACILITIES Provision of temporary jetty Demolition and clearance for Item 1B04 Shooting of Digital Video Films of the Project Compilation and submission of Digital Video Documentary Film of the Project	L.S L.S Mon. L.S	1 1 36 1	11,041,980 11,041, 4,222,843 4,222, 3,300 118,4 0	43 53,413 53,413	10,632,40 533,52

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PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN (YE UNIT COST)	CURRENCY N) AMOUNT	LOCAL C (US UNIT COST		TOTAL AMOUNT IN (YEN)
C01 C02 C03 C04 C05 C06 C07 C08 C09 C10 C11 C12 C13 C14	CILITIES FOR THE EMPLOYEE AND THE ENGINEER Renovation of CEPA's temporary office Maintenance for Item 1C01 Construction and furnishing office for the Employer/Engineer Maintenance for Item 1C03 Renovation before hand-over for Item 1C03 Renovation of laboratory Provision and maintenance of laboratory equipment Provision, maintenance and services of boats for the Engineer Provision of vehicles Type-A Provision of vehicles Type-B Provision of vehicles Type-C Provision of vehicles Type-D Maintenance of vehicles for Type-A, B, C and D Provision and maintenance of Engineer's survey equipment Provision and maintenance of accomodation for the Employer/Engine	L.S Mon. L.S Mon. Nos Nos Nos Nos Nos Mon. Mon. Mon. Mon.	1 8 1 28 1 1 36 36 4 36 36 303	UNIT COST 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AMUUNT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	32,000 2,000 347,485 2,500 19,440 1,600 165 2,400 37,700 26,940 36,550 30,550 3,614 2,325 600	32,000 16,000 347,485 70,000 19,440 1,600 5,940 86,400 37,700 53,880 219,300 122,200 130,104	$\begin{array}{c} 3, 840, 00\\ 1, 920, 00\\ 41, 698, 20\\ 8, 400, 00\\ 2, 332, 80\\ 192, 00\\ 712, 80\\ 10, 368, 00\\ 4, 524, 00\\ 6, 465, 60\\ 26, 316, 00\\ 14, 664, 00\\ 15, 612, 48\\ 10, 044, 00\end{array}$
							1,407,549	168,905,88

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ITEM	DESCRIPTION	UNIT	QUANTITY	FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN
]		UNIT COST	AMOUNT	UNIT COST	AMOUNT]	(YEN)
1D01	MOLITION AND CLEARANCE OF THE SITE Demolition and clearance of the building foundation and	L.S	. 1	2,124,000	2,124,000	37,980	37,980	6,681,600
1002	others in the project site Demolition and clearance of the existing berth and others in theproject site	L.S	1	572,774	572,774	8,759	8,759	1,623,854
	Demolition and clearance of the trees and others in the	L.S	1	79,000	79,000	1,450	1,450	253,000
	project site							
								•
	<u>1. – </u>	<u></u>					of This Page b. Section 1D	

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ITEM		DESCRIPTION		UNIT	QUANTITY	(YE	CURRENCY N)	LOCAL CU (US	\$)	TOTAL AMOUNT
1E 1E01 1E02	PROVISIONAL SUMS Additional geological, envi Day work	ronmental and hydrographic i	investigati	L.S L.S	1	<u>UNIT COST</u> 36,000,000 0	AMOUNT 36,000,000 0	UNIT COST 0 0 50,000	AMOUNT 0 50,000	(YEN) 36,000,000 6,000,000
· .							36,000,000		50,000 of This Page	42,000,00

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SECTION 200 CIVIL WORK

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PAY	DESCRIPTION		 		UNIT	NIT QUANTITY	·* · (N CURRENCY YEN)	· · · ((CURRENCY IS\$)	TOTAL AMOUNT IN
I TEM	<u> </u>				<u> </u>	<u> </u>	UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2A 2B 2C 2D 2E 2F	N 200 CIVIL WORK DREDGING WORK CONTAINER BERTH WORK MULTI-PURPOSE BERTH WO PASSENGER BERTH WORK REVETMENT WORK RECLAMATION WORK PAVEMENT WORK DRAINAGE WORK NAVIGATION AIDS SECURITY FENCE	RK			L.S L.S L.S L.S L.S L.S L.S L.S			2,601,971,709 449,713,676 324,055,498 99,431,521 71,405,172 145,728,000 23,428,600 13,690,720 146,185,000 62,635		7, 760, 203 8, 481, 501 6, 738, 612 240, 229 3, 006, 285 3, 491, 400 4, 899, 585 1, 745, 136 26, 880 53, 159 for Bill No. 2	1,467,493,79 1,132,688,93 128,259,00 432,159,37 564,696,00 611,378,80 223,107,04 149,410,60 6,441,71

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PAY	DESCRIPTION	UNIT	QUANTITY	· (Y	CURRENCY EN)	(US		TOTAL AMOUNT IN
ITEM		<u> </u>		UNIT COST	AMOUNT	UNIT COST	AMOUNT	<u>(YEN)</u>
2A DRI	EDGING WORK							
	Outer channel dredging (-14.5) offshore dumping	M3	3,120,000	178	555,360,000	0.41	1,279,200	708,864,000
2A02	Outer channel dredging (-14.5) onshore dumping	M3	1,040,000	199	206,960,000	0.54	561,600	274,352,000
2A03	Inner channel dredging (-14.0) offshore dumping	M3	3,352,000			0.44	1,474,880	820,569,600
2A04	Inner channel dredging (-14.0) onshore dumping	M3	1,117,000			0.51	569,670	276,122,400
2A05	Turning basin dredging (-14.0) offshore dumping	m3	2,092,000			0.49	1,025,080	566,513,600
2A06	Turning basin dredging (-14.0) onshore dumping	M3	698,000		127,734,000	0.50	349,000	169,614,000
2A07	Passenger turning basin	M3	70,000		14,840,000	0.49	34,300	18,956,000
2A08	Container berth	M3	243,000		51,516,000	0.49	119,070	65,804,400
	Multi-purpose berth	M3	279,000		59,148,000	0.49	136,710	75,553,200
2A10	West revetment	M3	385,000		89,320,000	0.71	273,350	122,122,000
	East revetment	M3	198,000				140,580	62,805,600
	Reclamation area	M3	481,000				341,510	152,573,200
2A13	Temporary revetment and bund for onshore dumping	LS	. .	44,715,750	44,715,750	1,455,252.66	1,455,253	219,346,069
i								
· · · ·		1				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
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				la l				
					2,601,971,750		7,760,203	
		فمز وجا الكالا الألي				Sub tota	l of This Page	3,533,196,069
					tan ang sa	Total of Su	b. Section 2A	3,533,196,069

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						CURRENCY	LOCAL CU		TOTAL AMOUNT
PAY ITEM	DESCRIPTION	11 - A	UNIT	QUANTITY	UNIT COST	AMOUNT	UNIT COST	AMOUNT	IN (YEN)
1101		<u> </u>			0011 0001	ANUURI		A30011	(160)
2B CO	(NTAINER BERTH WORK		1			[
2B01	Rubble mound of caisson								
	Rubble mound of caisson		M3 -	54,600	481	26,262,600	15.35	838,110	126,835,800
	Asphalt matt			l ·	j		}		
2802	Asphalt matt		_ M2	7,480	12	. 89,760	45.17	337,872	40,634,35
	Armour stone								
2B03	Armour stone		M3	3,820	472	1,803,040	16.12	61,578	9,192,44
	Caisson production				14 000 000	000 001 110	050 005 44	4 054 000	
2804	Caisson production		Nos	17	14,023,026	238,391,442	273,805.41	4,654,692	796,954,47
	Temporary anchoring of caisson			17	000 011	 		11 040	0.001.00
	Temporary anchoring of caisson		Nos	17	388,211	6,599,587	696.96	11,848	8,021,38
	Placing of caisson Placing of caisson		Nos	17,	365, 413	6,212,021	978.59	16,636	8,208,34
	Sand filling into caisson		. nus	1/	500,410	0,212,021	510.05	10,000	±0,200£,0
	Sand filling into caisson		M3	84,500	368	31,096,000	6.23	526,435	94,268,20
	Cover concrete of caisson			01,000	500	01,000,000	. 0.20	020,400	04,200,20
	Cover concrete of caisson		M3	2,780	234	650,520	81.19	225,708	27,735,50
	Coping concrete			2,,,		000,020		220,100	27,00,00
	Coping concrete		M3	5,460	460	2,511,600	125.12	683,155	84,490,22
	Apron concrete pavement			.,		_,,		,	
2B10	Apron concrete pavement		M2	7,200	108	777,600	40.37	290,664	35,657,28
	Sand protection sheet								
	Sand protection sheet		М	553	8,525	4,714,325	2.29	1,266	4,866,28
	Backfilling behind caisson				•				
	Backfilling behind caisson		M3 .	49,100	335	16,448,500	12.76	626,516	91,630,42
						335,556,995	·	8,274,481	
_							Sub total	l of This Page	1,328,494,72

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	IBITO	011439/011/037		CURRENCY		URRENCY	TOTAL AMOUNT IN
DESCRIPTION	UNIT	QUANIIII		AMOUNT	UNIT COST	AMOUNT	(YEN)
Driving of steel pipe pile for crane rail foundation							
Driving of steel pipe pile for crane rail foundation	Nos	68	686,986	46,715,048	441.27	30,006	50,315,811
Concrete of crane rail foundation							
	M3	1,160	374	433,840	130.13	150,951	18,547,936
				10 501 000	A A A		
		570					15,347,556
		1					638,594
		10					304,851
		4					277,310
	r	ŏ					471,528
	NOS		149,428	2,390,848	20.80	555	2,430,784
	Non	25	1 400 451	37 486 275	118 78	2 070	37,842,615
	nus	20	1,433,401	01,4200,210	110-10	2,010	010,0±∆,010
	Noc	10	738 065	0 504 845	100 36	1 429	9,765,447
	NOS	10	100,000	3,034,040	103.00	1, 766	J, (00, 11)
	Nos	4	752,728	3,010,912	95.26	381	3,056,637
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				114 150 041		007 000	
				114,150,641			
		1		L	Sub tota		138,999,069
							1,467,493,794
		Driving of steel pipe pile for crane rail foundationDriving of steel pipe pile for crane rail foundationConcrete of crane rail foundationConcrete of crane rail foundationCrane rail with accessoriesCrane rail with accessoriesCable trenchJack-up baseEnd stopperSocket blockCrane anchoring frameFender type AFender type ABollardBollardNosLadder	Driving of steel pipe pile for crane rail foundation Driving of steel pipe pile for crane rail foundationNos68Concrete of crane rail foundation Concrete of crane rail foundationM31,160Crane rail with accessories Crane rail with accessoriesM670Cable trench 	DESCRIPTIONUNITQUANTITY(YDriving of steel pipe pile for crane rail foundation Driving of steel pipe pile for crane rail foundation Concrete of crane rail foundation Concrete of crane rail foundationNos68686,986Concrete of crane rail foundation Concrete of crane rail foundationM31,160374Crane rail with accessories Crane rail with accessoriesM67020,286Cable trench Jack-up baseL.S128,201Jack-up base End stopperNos1616,064End stopper Socket blockNos16149,428Fender type A Fender type A BollardNos13738,065	DESCRIPTIONUNITQUANTITY(YEN)Driving of steel pipe pile for crane rail foundation Driving of steel pipe pile for crane rail foundation Concrete of crane rail foundation Concrete of crane rail foundationNos68686,98646,715,048Concrete of crane rail foundation Concrete of crane rail foundationM31,160374433,840Crane rail with accessories Crane rail with accessoriesM67020,28613,591,620Cable trench Jack-up baseL.S128,20128,201Jack-up base Socket blockNos1616,064257,024Rend stopper Socket blockNos16149,4282,390,848Fender type A BollardNos13738,0659,594,845	DESCRIPTION UNIT QUANTITY (YEN) (UNIT COST AMOUNT UNIT COST AMOUNT UNIT COST OUNT COST AMOUNT UNIT COST AMOUNT Cost A	DESCRIPTION UNIT QUANTITY (US) (USS) Driving of steel pipe pile for crane rail foundation Nos 68 686,986 46,715,048 441.27 30,006 Concrete of crane rail foundation M3 1,160 374 433,840 130.13 150,951 Concrete of crane rail foundation M3 1,160 374 433,840 130.13 150,951 Crane rail with accessories M 670 20,286 13,591,620 21.84 14,633 Cable trench L.S 1 28,201 5,086.61 5,086.61 5,086.61 5,087 Jack-up base Nos 16 16,064 257,024 24.91 399 End stopper Nos 16 149,428 2,390,848 20.80 333 Fender type A Nos 13 738,065 9,594,845 109.36 1,422 Iadder Nos 13 738,065 9,594,845 109.36 1,422 Ladder Nos 4 752,728

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PAY	DESCRIPTION	UNIT	QUANTITY	(YE		LOCAL CUI (US\$;)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
C MU	LTI-PURPOSE BERTH WORK		ļ					
	Rubble mound of caisson	140		401	04 040 400	15 05	1 005 000	105 000 00
C01	Rubble mound of caisson	M3	71,400	481	34,343,400	15.35	1,095,990	165,862,20
	Asphalt matt	M2	5 000	. 10	63 960	45.17	000 400	00 000 00
202	Asphalt matt	n2	5,280	12	63,360	40.1(238,498	28,683,07
	Armour stone		1 400	4720	0 105 100	10 10	71 005	10 000 5/
203	Armour stone Caisson production	M3	4,460	472	2,105,120	16.12	71,895	10,732,54
204	Caisson production	Nos	12	13,309,492	159,713,904	273,408.42	3,280,901	553,422,02
.004	Temporary anchoring of caisson		14	10,000,432	103, (10, 304	2:0,200.10	0,200,301	000, ±22, 02
C05	Temporary anchoring of caisson	Nos	12	388,211	4,658,532	696.96	8,364	5,662,15
	Placing of caisson				1,000,002		0,001	0,002,10
	Placing of caisson	Nos	12	365,413	4,384,956	978.59	11,743	5,794,12
	Sand filling into caisson		12	000, 110	1,001,000	010.00	11,140	0,104,12
C07	Sand filling into caisson	M3	59,700	368	21,969,600	6.23	371,931	66,601,3
001	Cover concrete of caisson		00,100		21,000,000		011,001	00,001,0
C08	Cover concrete of caisson	МЗ	1,960	234	458,640	81.19	159,132	19,554,5
	Coping concrete	· · [· · · ·]	2,000	201				
C09	Coping concrete	M3	6,430	460	2,957,800	125.12	804,522	99,500,3
	Apron concrete pavement			· · ·				,,
C10	Apron concrete pavement	M2	1,980	108	213,840	40.37	79,933	9,805,7
	Sand protection sheet				. 1			
C11	Sand protection sheet	м	280	8,525	2,387,000	2.29	641	2,463,9
	Backfilling of caisson	. [·			
C12	Backfilling of caisson	M3	37,200	335	12,462,000	12.76	474,672	69,422,64
					245,718,152		6,598,221	
			<u> </u>	i	<u>210,110,102</u>	t to the test	of This Page	1,037,504,7

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PAY	DESCRIPTION	UNIT	QUANTITY		CURRENCY EN)	LOCAL C (US		TOTAL AMOUNT IN
ITEM	DESCRIPTION	UNII	. SOUTHILL	UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
· · · ·	Driving of steel pipe pile for crane rail foundation							
2013	Driving of steel pipe pile for crane rail foundation	Nos	44	686,986	30,227,384	441.27	19,416	32,557,290
	Concrete of crane rail foundation							
2014	Concrete of crane rail foundation	M3	750	374	280,500	130.13	97,598	11,992,200
	Crane rail with accessories							15 050 054
2015	Crane rail with accessories	M	658	20,286				15,072,674
2C16	Cable trench	L.S	1	28,201	28,201	5,086.61		638,594
2017	End stopper	Nos	2	4,353				45,568
2018	Socket block	Nos	4	2,388				34,896
2019	Crane anchoring frame	Nos	8	97,678	781,424	27.74	222	808,054
	Fender type A	Nati	17	1 400 451	05 400 007	110 70	9.010	05 720 070
2C20	Fender type A	Nos	11	1,499,451	25,490,667	118.78	2,019	25,732,978
2021	Bollard Bollard	Nos	8	738,065	5,904,520	109.36	875	6,009,506
2021	Ladder	105	U	100,000	0,004,020	. 100.00	010	0,000,000
2022	Ladder	Nos	3	752,728	2,258,184	95.26	286	2,292,478
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					70 007 000		10.001	
					78,337,326 324,055,478		140,391 6,738,612	
	1	1			041,000,410		al of This Page	95, 184, 238
							1b. Section 2C	1,132,688,938

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PAY DESCRIPTION	UNIT	QUANTITY	FOREIGN ((YE		LOCAL CUR (US\$		TOTAL AMOUNT IN
PAY DESCRIPTION ITEM	UNII	QUANTITI -	UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
D PASSENGER BERTH WORK							
Driving of steel pipe pile D01 Driving of steel pipe pile Ø600mm,700mm,110 Superstructure	Omm Nos	37	1,157,240	42,817,880	1,112.78	41,173	47,758,6
D02 Superstructure Corrosion-proof	M3	823	3,050	2,510,150	191.98	158,000	21,470,0
D03 Corrosion-proof Catwalk	Nos	43	618,112	26,578,816	391.64	16,841	28,599,6
DO4 Catwalk Fender type B and type C	Nos	2	21,722	43,444	7,795.74	15,591	1,914,4
005 Fender type B and type C Bollard	Nos	18	933,305	16,799,490	137.91	2,482	17,097,3
DO6 Bollard Access bridge	Nos	7	765,795	5,360,565	95.69	670	5,440,9
007 Access bridge Ladder	Nos	10	5,204	52,040	480.59	4,806	628,5
D08 Ladder	Nos	7	752,728	5,269,096	95.26	667	5,349,3
				99,431,481		240,229	
					Sub total	of This Page	128,259,

Total of Sub. Section 2D 128,259,001

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PAY		DESCRIPTION		UNIT	QUANTITY	(N CURRENCY YEN)	(CURRENCY US\$)	TOTAL AMOUNT IN
ITEM		•	· · ·			UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
E RE E01 E02	V ETMENT WEST REVETMENT EAST REVETMENT			M M	400 250	128,457 80,090	51,382,620 20,022,500	5,428.01 3,340.33	2,171,203 835,083	311,926,98 120,232,40
* [*]										
•										
						· · · · · ·				
· .										
							71,405,120		3,006,286 tal of This Page	

BOQ Section 200 Page 7

Bill No 2E01 WEST REVETMENT

US\$=¥120 LOCAL CURRENCY FOREIGN CURRENCY TOTAL AMOUNT PAY DESCRIPTION UNIT QUANTITY (YEN) (US\$) IN ITEM UNIT COST UNIT COST AMOUNT (YEN) AMOUNT 2201 WEST REVETMENT Rubble stone including geotextile and leveling 2E0101 Rubble stone including geotextile and leveling M3 119,000 3361 39,984,000 13.05 1,552,950 226,338,000 Armour stone M3 12,400 472 5,852,800 16.12 199,888 29,839,360 2E0102 Armour stone Concrete block M3 38,797,124 2E0103 Concrete block 2,780 1,633 4,539,740 102.69 285,478 Concrete wall 2E0104 Concrete wall 1,310 768 1,006,080 132,886 16,952,448 M3 101.44 51,382,620 2,171,203 Sub Total for This Page 311,926,932 Total for Bill No. 2E01 311,926,932

BOQ Section 200 Page 7-1

Bill No 2E02 EAST REVETMENT

US	\$=¥	¥12	20
ັບນ	$\psi - 2$	<u> </u>	40

PAY	DESCRIPTION	UNIT	QUANTITY		N CURRENCY YEN)		CURRENCY US\$)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2E0201	EAST REVETMENT Rubble stone including geotextile and leveling Rubble stone including geotextile and leveling	M3	48,500	336	16,296,000	13.08	634,380	92,421,600
2E0202	Armour stone Armour stone	M3	6,300	472	2,973,600	16.12	101,556	15,160,32
	Concrete wall Concrete wall	МЗ	980	768	752,640	101.17	99,147	12,650,23
							,	
					20,022,240		835,083	
						Sub Tota Total fo	l for This Page or Bill No. 2E02	120,232,15 120,232,15

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PAY	DESCRIPTION	UNIT	QUANTITY	(YE	CURRENCY N)	LOCAL CUR (US\$)		TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2F01	LAMATION Land reclamation including fill material supply Land reclamation by dredged materials	M3 M3	1,518,000 2,855,000	96 0	1 45, 728,000 0	2.30 0.00	3,491,400 0.00	564,696,00((
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								·
-								
							of This Page	564,696,00

BOQ Section 200 Page 8

PAY ITEM DESCRIPTION UNIT QUANTITY (YEN) (UISS) IN 26 PAYEMENT 2600 Concrete pavement type 1 for ETG traffic lane M2 8,600 112 963,200 44.91 386,225 47,310 2601 Concrete pavement type 1 for ETG traffic lane M2 71,200 1007 7,613,400 40.37 2,874,344 322,533 2602 Concrete pavement type 3 M2 19,000 180 3,20,000 14.91 282,203 37,4144 386,225 374,344 322,533 2603 Asphalt concrete pavement type 4 M2 19,000 95 1,520,000 13.69 219,040 27,804 2605 Macadam pavement type 4 M2 2,600 71 184,600 10.60 27,866 3,931 2606 Interlocking concrete block pavement type 6 for sidewalk M2 2,000 71 184,600 10.60 27,866 3,949 2606 Gravel pavement K2 2,000 0 3,400 14.60		·			FORFICE		LOCAL O	IDDENOV	US\$=¥1 TOTAL AMOUNT
TTEM UNIT COST AMOUNT UNIT COST AMOUNT (YEN) G PAVEMENT Concrete pavement type 1 for RTG traffic lane M2 8,600 112 963,200 44.91 386,226 47,310 GO1 Concrete pavement type 2 M2 71,200 107 7,618,400 40.37 2,874,344 362,533 GO3 Asphalt concrete pavement type 3 M2 16,000 95 1,520,000 14.91 283,220 37,414 GO4 Macadam pavement type 4 M2 16,000 95 5,320,000 11.24 629,440 80,852 GO6 Interlocking concrete block pavement type 6 for sidewalk M2 20,250 190 3,847,500 14.68 297,270 39,493 GO8 Topscil and grassing M2 13,700 0 0 3.00 41,100 4,932 GO1 Concrete curb type-1 M 3,600 54 194,400 9.31 33,516 4,216 GO2 Concrete curb type-3 M 1,100 <t< th=""><th>PAY DESCRIPTION</th><th>. 1</th><th>UNIT</th><th>QUANTITY</th><th></th><th></th><th></th><th></th><th></th></t<>	PAY DESCRIPTION	. 1	UNIT	QUANTITY					
2601 Concrete pavement type 1 for RTG traffic lane M2 8,600 112 963,200 44.91 386,226 47,310 2602 Concrete pavement type 2 M2 71,200 107 7,618,400 40.37 2,874,344 352,533 2603 Asphalt concrete pavement type 3 M2 19,000 180 3,420,000 14.91 283,290 37,414 2604 Macadam pavement type 4 M2 16,000 95 1,520,000 13.69 219,040 27,804 2605 Macadam pavement type 5 M2 56,000 95 5,320,000 11.24 629,440 80,852 2606 Interlocking concrete block pavement type 6 for sidewalk M2 2,600 71 184,600 10.60 27,560 3,493 2607 Gravel pavement M2 3,600 54 194,400 9.31 33,516 4,216 2608 Togsoil and grassing M2 13,700 0 0 3.00 14,168 297,270 39,516 261						AMOUNT	UNIT COST	AMOUNT	(YEN)
Gold Concrete parament type 2 M2 71,200 107 7,618,400 40.37 2,874,344 352,533 2603 Asphalt concrete parement type 3 M2 19,000 180 3,420,000 14.91 283,290 37,414 2604 Macadam parement type 4 M2 19,000 95 1,520,000 13.69 219,040 27,804 2605 Macadam parement type 5 M2 56,000 95 5,320,000 11.24 629,440 80,852 2606 Interlocking concrete block parement type 6 for sidewalk M2 2,600 71 184,600 10.60 27,560 3,493 2607 Gravel parement M2 2,0250 190 3,847,500 14.68 297,270 39,512 2608 Topscil and grassing M2 13,700 0 0 0 3.00 41.100 4,933 2609 Concrete curb type-1 M 3,600 54 194,400 9.31 33,516 4,216 2611 Concrete curb type-3 M 1,100 81 89,100 13.67 15,037 1,893 <td>G PAVEMENT</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	G PAVEMENT								
	 G02 Concrete pavement type 2 G03 Asphalt concrete pavement type 3 G04 Macadam pavement type 4 G05 Macadam pavement type 5 G06 Interlocking concrete block pavement type 6 for G07 Gravel pavement G08 Topscil and grassing G09 Concrete curb type-1 G10 Concrete curb type-2 G11 Concrete curb type-3 G12 Traffic marking 	sidewalk	M2 M2 M2 M2 M2 M2 M2 M2 M M M M M M	$71,200 \\ 19,000 \\ 16,000 \\ 56,000 \\ 2,600 \\ 20,250 \\ 13,700 \\ 3,600 \\ 2,000 \\ 1,100 \\ 1,100 \\ 19,000 \\ 1,100 \\ 1$	107 180 95 71 190 0 54 58 81	$\begin{array}{c} 7, 618, 400\\ 3, 420, 000\\ 1, 520, 000\\ 5, 320, 000\\ 184, 600\\ 3, 847, 500\\ 0\\ 194, 400\\ 116, 000\\ 89, 100 \end{array}$	$\begin{array}{c} 40.37\\ 14.91\\ 13.69\\ 11.24\\ 10.60\\ 14.68\\ 3.00\\ 9.31\\ 10.01\\ 13.67\\ 7.74\end{array}$	$\begin{array}{c} 2,874,344\\ 283,290\\ 219,040\\ 629,440\\ 27,560\\ 297,270\\ 41,100\\ 33,516\\ 20,020\\ 15,037\\ 57,276\end{array}$	352,539,6 37,414,8 27,804,8 80,852,8 3,491,8 39,519,9 4,932,0 4,216,3 2,518,4 1,893,5 7,028,5
						23,428,600		4,899,585	

Total of Sub. Section 26 611,378,800

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24

Bill NO 2GO1 CONCRETE PAVEMENT TYPE 1 FOR RTG TRAFFIC LANE

				10170	011411/017/017		U CURRENCY	LOCAL CURREN	CY	TOTAL AMOUNT IN
PAY ITEM		DESCRIPTION		UNIT	QUANTITY	UNIT COST	(EN)AMOUNT	UNIT COST	AMOUNT	(YEN)
G0101 G0102 G0103 G0104	CONCRETE PAVEMENT TYPE Subgrade preparation Subbase course Base course Prime coating Concrete slab	1 FOR RTG TRAFFI	(C LANE	M2 M2 M2 M2 M2 M2	8,600 8,600 8,600 8,600 8,600 8,600	27.00 18.00 2.00	232,200 154,800 17,200	2.13 4.50 0.47	10,922 18,318 38,700 4,042 314,244	1,534,2 2,430,3 4,798,8 502,2 38,044,6
	н. Пология По					· · · ·				
						112	963,200	44.91	386,226	
								Sub Total fo Total for Bi		47,310,3 47,310,3

BOQ Section 200 Page 9-1

Bill No 2602 CONCRETE PAVEMENT TYPE 2

US\$=¥120

PAY		DESCRIPTION	UNIT	QUANTITY	(Y	CURRENCY YEN)	l · (CURRENCY US\$)	TOTAL AMOUNT
ITEM					UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
30201 30202 30203 30203	ONCRETE PAVEMENT TYPE Subgrade preparation Subbase course Base course Prime coating Concrete slab	2	M2 M2 M2 M2 M2 M2	71,200 71,200 71,200 71,200 71,200	27 18 2	1,851,200 1,922,400 1,281,600 142,400 2,420,800	2.13 4.50 0.47	151,656 320,400 33,464	20,121,1 39,729,6 4,158,0
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		· · · · · · · · · · · · · · · · · · ·				1			
· · .]					107	7,618,400	40.37	2,874,344	
i				· .	.		Sub Ta	tal for This Page for Bill No. 2602	352, 539,

BOQ Section 200 Page 9-2

Bill No 2GO3 ASPHALT CONCRETE PAVEMENT TYPE 3

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2G0301 2G0302 2G0303 2G0304 2G0305 2G0306	ASPHALT CONCRETE PAVEMENT TYPE 3 Subgrade preparation Subbase course Base course Prime coating Binder course Tack coating Surface course	M2 M2 M2 M2 M2 M2 M2 M2 M2	19,000 19,000 19,000 19,000 19,000 19,000 19,000	42 18 2 45 2	491,720 794,770 349,030 46,740 851,960 31,160 851,960	4.01 3.12 0.47 2.76 0.26	24,130 76,190 59,280 8,930 52,440 4,940 57,380	9,937,57(7,462,630 1,118,340 7,144,760 623,960
				180	3,417,340	14.91	283,290	
			·	· · · · · ·		Sub Tot	al for This Page for Bill No. 2G03	

BOQ Section 200 Page 9-3

Bill No 2G04 MACADAM PAVEMENT TYPE 4

US\$=¥120

PAY	DESCRIPTION		QUANTITY	FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN
ITEM		UNIT		UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2G0401 2G0402 2G0403	AACADAM PAVEMENT TYPE 4 Subgrade preparation Subbase course Base course Prime coating	M2 M2 M2 M2	16,000 16,000 16,000 16,000	42 25	414,080 669,280 404,800 38,720	4.55 7.40	20,320 72,800 118,400 7,520	2,852,480 9,405,280 14,612,800 941,120
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				· .				
				95	1,526,880		219,040	
						Sub Tota	al for This Page or Bill No. 2604	27,811,680

BOQ Section 200 Page 9-4

Bill No 2G05 MACADAM PAVEMENT TYPE 5

US\$=¥120 TOTAL AMOUNT LOCAL CURRENCY FOREIGN CURRENCY IN (US\$) UNIT QUANTITY (YEN) PAY DESCRIPTION (YEN) UNIT COST UNIT COST AMOUNT AMOUNT ITEM 2605 NACADAN PAVEMENT TYPE 5 9,990,400 1.27 71,120 M2 1,456,000 56,000 26 2G0501 Subgrade preparation 25,737,600 41,854,400 3,270,400 194,880 2,352,000 3.4856,000 42 2G0502 Subbase course M2 56,000 6.02 337,120 25 1,400,000 M2 2G0503 Base course 112,000 0.47 26,320 56,000 M2 2G0504 Prime coating 5,320,000 11.24 629,440 95 Sub Total for This Page 80,852,80 Total for Bill No. 2G05 80,852,80

BOQ Section 200 Page 9-5

30

Bill No 2006 INTERLOCKING CONCRETE BLOCK PAVEMENT TYPE 6 FOR SIDEWALK

US\$=¥120

PAY	DESCRIPTION		QUANTITY	FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(US\$)
2G0601 2G0602 2G0603	INTERLOCKING CONCRETE BLOCK PAVEMENT TYPE 6 FOR SIDEWALK Subgrade preparation Base course Sand Interlocking concrete block	M2 M2 M2 M2 M2	2,600 2,600 2,600 2,600 2,600	11	67,600 28,600 2,600 83,200	2.60 0.21	3,302 6,760 546 16,952	463,84 839,80 68,12 2,117,44
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				70	182,000	10.60	27,560	÷

BOQ Section 200 Page 9-6

Bill No 2G07 GRAVEL PAVEMENT

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$) UNIT COST AMOUNT		TOTAL AMOUNT IN
ITEM				UNIT COST	UNIT COST AMOUNT		AMOUNT	(YEN)
2G0701 2G0702 2G0703 2G0704 2G0705 2G0706	GRAVEL PAVEMENT Gravel pavement Foundation for concrete stacking plate Concrete stacking plate type-A Concrete stacking plate type-B Concrete stacking plate type-C Concrete stacking plate type-D Concrete stacking plate type-E	M2 M2 Nos Nos Nos Nos	20,250 2,726 1,070 420 40 28 56	53 89 1,704 1,264 1,594 1,481 1,111	1,073,250242,6141,823,280530,88063,76041,46862,216	5.00 11.02 116.38 76.29 99.24 78.59 57.39	101,250 30,041 124,527 32,042 3,970 2,201 3,214	13, 223, 250 3, 847, 476 16, 766, 472 4, 375, 896 1, 167, 305 305, 530 447, 87
					0.007.400		007 0 40	
		1		<u>}</u>	3,837,468		297,243 1 for This Page r Bill No. 2G07	

BOQ Section 200 Page 9-7

Bill No 2G08 TOPSOIL AND GRASSING

32

PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGI	N CURRENCY YEN)	LOCAL (U	CURRENCY S\$)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
G08 G0801 G0802	TOPSOIL AND GRASSING Supply of topsoil Grassing	M2 M2	13,700 13,700	0 0	0 0	1.50 1.50	20,550 20,550	2,466,0 2,466,0
·								
·				· · · ·				
				0	0	3.00	41,100	4,932,0
			· · ·				al for This Page or Bill No. 2608	4,932,0

BOQ Section 200 Page 9-8

Bill No 2609 CONCRETE CURB TYPE 1

US\$=¥120 TOTAL AMOUNT FOREIGN CURRENCY LOCAL CURRENCY (YEN) (US\$) IN DESCRIPTION UNIT QUANTITY PAY (YEN) UNIT COST AMOUNT UNIT COST AMOUNT ITEM 2G09 CONCRETE CURB TYPE 1 3,065,760 93,600 6.88 24,768 3,600 2G0901 Production of curb M 26 28 2.43 8,748 1,150,560 2G0902 Placing of curb 100,800 3,600 M 9.31 33,516 194,400 54 Sub Total for This Page 4,216,320

Total for Bill No. 2609 4,216,320

Bill No 2G10 CONCRETE CURB TYPE 2

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	· (Y	CURRENCY (EN)	LOCAL	CURRENCY US\$)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2G1001	CONCRETE CORB TYPE 2 Production of curb Placing of curb	M M	2,000 2,000	24 34	48,000 68,000	6.30 3.71	12,600 7,420	1,560,00 958,40
* .								
·								
				58	116.000	10.01	20.020	
	I			58	116,000	Sub To	20,020 tal for This Page for Bill No. 2610	2,518,

BOG Section 200 Page 9-10

Bill No 2G11 CONCRETE CURB TYPE 3

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	· · · · · · · · · · · · · · · · · · ·	CURRENCY EN)	(ប	CURRENCY S\$)	TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2G1101	CONCRETE CURB TYPE 3 Production of curb Placing of curb	M M	1,100 1,100	44 37	48,400 40,700	9.70 3.97	10,670 4,367	1,328,800 564,740
		1 1 1						•
				81	89,100	13.67	15,037	
						Sub Tot	al for This Page or Bill No. 2610	1,893,54 1,893,54

BOQ Section 200 Page 9-11

Bill No 2G13 TRAFFIC SIGN BOARD

US\$=¥120

PAY ITEM		DESCRIPTION	UNIT	QUANTITY		N CURRENCY YEN) AMOUNT	LOCAL CU (USS UNIT COST	RRENCY 3) AMOUNT	TOTAL AMOUNT IN (YEN)
2613 1 261301 261302	TRAFFIC SIGN BOARD Guide post Sign post Road sign		Nos M M2	2 300 50	0	0 0 0	33.00 13.00 230.00	66 3,900 11,500	7,92 468,00
	, e e e e e e e e e e e e e e e e e e e								
	· .								
· .						··· ·			
					Λ	0	276.00	15,466	
		<u></u>		<u> </u>	· · · · · · · · ·	<u>1 </u>	Sub Tota	l for This Page r Bill No. 2610	1,855,92

BOQ Section 200 Page 9-12

					· . ·			US\$=¥120
PAY	DESCIT TOPT ON	UNIT	QUANTITY	FOREIGN CI (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN
ITEM	DESCRIPTION	ONIT	ADVIATI II	UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2H DR				1 000	1 107 040	50 51	50.070	10 500 074
	Pipe culvert 457mm	M	1,070	1,033	1,105,310	73.71	78,870	10,569,674
	Pipe culvert 610mm	M	810 174	1,367	1,107,270	103.79	84,070	11,195,658
	Pipe culvert 762mm Pipe culvert 914mm	M	866	1,695 1,602	294,930 1,387,332	115.40 182.82	20,080 158,322	2,704,482 20,385,986
	Pipe culvert 1219mm	M	580	2,164	1,255,120	277.79	161,118	20,589,300
	Diversion canal type A	M	580	3,355	1,945,900	369.47	214,293	27,661,012
	Diversion canal type B	M	675	2,293	1,547,775	362.14	244,445	30,881,115
	Manhole type 1 with concrete cover	Nos	34	19,039	647,326	1,463.76	49,768	6,619,467
	Manhole type 2-A with concrete cover	Nos	24	24,942	598,608	2,075.72	49,817	6,576,682
2H10	Manhole type 2-B with grating cover	Nos	12	24,942	299,304	2,594.86	31,138	4,035,902
	Manhole type 2-C with grating cover and concrete cover	Nos	··· · 4	33,691	134,764	4,018.98	16,076	2,063,874
2H12	Trench type 1 without cover	. M	1,110	477	529,470	55.92	62,071	7,978,014
2Н13	Trench type 1 with concrete cover	М	2,902	503	1,459,706	80.72	234,249	29,569,639
2H14	Trench type 1 with grating cover	M	308	503	154,924	200.66	61,803	7,571,318
	Trench type 2 without cover	M	355	709	251,695	79-33	28,162	3,631,153
	Trench type 2 with concrete cover Trench type 2 with grating cover	M	645 650	750 750	483,750 487,500	104.05 282.68	67,112 183,742	8,537,220 22,536,540
2817	Trench type 2 with grating cover	11	000		401,000	202.00	100,142	22,000,040
		.						
•								
					13,690,684		1,745,136	
				· · ·			of This Page Section 2H	223,107,040 223,107,040

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Bill No 2H01 PIPE CULVERT 457mm

38

CAL CURRENCY	TOTAL

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN ((YE	()	LOCAL C (US	\$\$)	TOTAL AMOUNT IN
ITEM		<u> </u>	<u> </u>	UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2H0101 2H0102 2H0103 2H0104	PIPE CULVERT 457mm Excavation and Disposal Crushed stone for foundation Lean concrete Installation drainage pipe Backfill sand and compaction	M M M M	1,070 1,070 1,070 1,070 1,070	41 55 279	43,870 58,850 298,530	1.56 7.65 33.17	1,669 8,186 35,492	1,041,110 4,557,558
								•
				-				a - 1
					· · · · ·			
				1,033	1,105,310	73.71	78,870	
		1	<u>I</u>	1,000	1,100,010	Sub Total	l for This Page	10,569,674
						Total for	r Bill No. 2H01	10,569,67

Bill No 2HO2 PIPE CULVERT 610mm

US\$=¥120

PAY	DESCRIPTION		UNIT	QUANTITY	FOREIGN (YEN		LOCAL CU		TOTAL AMOUNT IN
ITEM		· · · · ·			UNIT COST	AMOUNT	UNIT_COST	AMOUNT	(YEN)
2H0201 2H0202 2H0203 2H0204	PIPE CULVERT 610mm Excavation and Disposal Crushed stone for foundation Lean concrete Installation drainage pipe Backfill sand and compaction		M M M M M	810 810 810 810 810	48 92 279	479,520 38,880 74,520 225,990 288,360	9.98 1.92 13.13 40.29 38.47	8,084 1,555 10,635 32,635 31,161	1,449,576 225,504 1,350,756 4,142,178 4,027,644
		-							
 .		· .							
					1,367	1,107,270	103.79	84,070	
								for This Page Bill No. 2H02	

Bill No 2H03 PIPE CULVERT 762mm

PAY DESCRIPTION	UNIT	QUANTITY	FOREIGN CU (YEN)		LOCAL CURRENC		US\$=¥120 TOTAL AMOUNT IN
ITEM 2H03 PIPE CULVERT 762mm 2H0301 Excavation and Disposal 2H0302 Crushed stone for foundation 2H0303 Lean concrete 2H0304 Installation drainage pipe 2H0305 Backfill sand and compaction	M M M M M	174 174 174 174 174	UNIT COST 888 48 92 311 356	AMOUNT 154,512 8,352 16,008 54,114 61,944	UNIT COST AN 14.96 2.18 18.82 40.97 38.47	2,603 379 3,275 7,129 6,694	(YEN) 466,877 53,870 408,970 909,568 865,198
							· · ·

40

Bill No 2H04 PIPE CULVERT 914mm

US\$=¥120 FOREIGN CURRENCY LOCAL CURRENCY TOTAL AMOUNT (YEN) (US\$) DESCRIPTION UNIT PAY QUANTITY IN ITEM UNIT COST AMOUNT UNIT COST AMOUNT (YEN) 2H04 PIPE CULVERT 914mm 2H0401 Excavation and Disposal M 589,746 9,933 1,781,708 866 681 11.47 2H0402 Crushed stone for foundation 866 55 47,630 2.53 2,191 310,548 М 21,529 82,426 2H0403 Lean concrete 866 95,260 24.86 2,678,711 М 110 866 2H0404 Installation drainage pipe 311 269,326 95.18 10,160,432 M 2H0405 Backfill sand and compaction M 866 445 385,370 48.78 42,243 5,454,588 1,387,332 1,602 182.82 158,322 20,385,986 Sub Total for This Page Total for Bill No. 2H04 20,385,986

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Bill No 2H05 PIPE CULVERT 1219mm

PAY	DESCRIPTION	UNIT	QUANTITY		FOREIGN CURRENCY (YEN) UNIT COST AMOUNT		RENCY) AMOUNT	TOTAL AMOUNT IN (YEN)
H0501 H0502 H0503 H0504	IPE CULVERT 1219 Excavation and Disposal Crushed stone for foundation Lean concrete Installation drainage pipe Backfill sand and compaction	M M M M M	580 580 580 580 580	888 69	515,040 40,020 106,720 180,380 412,960	UNIT COST 14.96 3.27 41.44 164.47 53.65	8,677 1,897 24,035 95,393 31,117	1,556,24 267,6: 2,990,94 11,627,44 4,147,00
								·
				2,164	1,255,120	277.79	161,118	

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Bill No 2H06 DIVERSION CANAL TYPE A

US\$=¥120 FOREIGN CURRENCY LOCAL CURRENCY TOTAL AMOUNT (US\$) IN PAY DESCRIPTION UNIT QUANTITY (YEN) UNIT COST (YEN) ITEM UNIT COST AMOUNT AMOUNT 2H06 DIVERSION CANAL TYPE A 2H0601 Excavation and Disposal 2,695,376 М 580 1,538 892,040 25.91 15,0285,832,016 2H0602 Placing of stone M 580 54,520 83.01 48,146 94 873,649 2H0603 Outlet 38,669 6,958.17 6,958 38,669 LS 1 349,860 223.71 46,979 5,987,352 2H0604 Canal branch A-1 210 1,666 M 10,743,894 524,610 315.41 85,161 2H0605 Canal branch A-2 1,943 M 270 1,529,240 2H0606 Catch basin 86,394 .86,394 12,023.72 12,024LS 1,946,093 214,295 Sub Total for This Page 27,661,528 Total for Bill No. 2H06 27,661,528

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Bill No 2H07 DIVERSION CANAL TYPE B

US\$=¥120

PAY		DESCRIPTION		UNIT	QUANTITY	FOREIGN (YE	N)	LOCAL CI (US	\$)	TOTAL AMOUNT IN
ITEM						UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
H0701 H0702 H0703	DIVERSION CANAL TYPE B Excavation and Disposal Placing of stone Outlet Canal branch			M M L.S M	675 675 1 365	764 70 26,163 2,627	47,250 26,163	113.12 3,766.55	8,687 76,356 3,767 155,632	478,14
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·		· · · · · · · · · · · · · · · · · · ·					1,547,968		244,442	
					· · · · · · · · · · · · · · · · · · ·				for This Page Bill No. 2807	

Bill No 2H08 MANHOLE TYPE 1 WITH CONCRETE COVER

US\$=¥120 LOCAL CURRENCY FOREIGN CURRENCY TOTAL AMOUNT PAY DESCRIPTION UNIT QUANTITY (YEN) (US\$) IN UNIT COST (YEN) UNIT COST AMOUNT AMOUNT ITEM 2HOS MANHOLE TYPE 1 WITH CONCRETE COVER 2H0801 Excavation and Disposal 2,961 100,674 57.47335,152 Nos 34 1,954 62,431 129,907 2H0802 Crushed stone for foundation 34 14,042 11.86 403 Nos 413 4,080 30.84 1,049 2H0803 Lean concrete 34 120 Nos 2H0804 Reinforcement bar 34 232,662 529.93 18,018 2,394,776 6,843 Nos 2H0805 Corner angle 34 587 19,958 57.12 1,942 253,008 Nos 554.92 18,867 2,419,012 2H0806 Concrete placing Nos 344,557 154,938 2H0807 Backfill sand and compaction 221.62 7,535 1,025,182 Nos 34 3,558 120,972 1,463.76 19,039647,326 49,768 Sub Total for This Page 6,619,467

Total for Bill No. 2H08

6,619,467

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Bill No 2H09 MANHOLE TYPE 2-A WITH CONCRETE COVER

US\$=¥120

PAY ITEM	DESCRIPTION	UNIT	QUANTITY	FOREIGN (YE UNIT COST		LOCAL CUP (US\$ UNIT COST		TOTAL AMOUNT IN (YEN)
2H0901 2H0902 2H0903 2H0904 2H0905 2H0906	ANHOLE TYPE 2 WITH CONCRETE COVER Excavation and Disposal Crushed stone for foundation Lean concrete Reinforcement bar Corner angle Concrete placing Backfill sand and compaction	Nos Nos Nos Nos Nos Nos	24 24 24 24 24 24 24 24	551 166 9,066 704 4,974	13,224 3,984 217,584 16,896 119,376	114.94 15.79 41.01 753.10 68.57 772.14 310.17	2,759 379 984 18,074 1,646 18,531 7,444	473,179 58,699 122,093 2,386,512 214,378 2,343,139 978,682
							- - -	
				24,942	598,608	2,075.72	49,817	
						Sub Total	for This Page Bill No. 2H09	6,576,68 6,576,68

Bill No 2H10 MANHOLE TYPE 2-B WITH GRATING COVER

US\$=¥120 LOCAL CURRENCY TOTAL AMOUNT FOREIGN CURRENCY (YEN) (US\$) IN QUANTITY PAY DESCRIPTION UNIT AMOUNT (YEN) AMOUNT UNIT COST UNIT COST ITEM 2H10 MANHOLE TYPE 2-B WITH GRATING COVER 236,590 5,923 71,076 114.94 1,3792H1001 Excavation and Disposal Nos 12 15.79 189 29,350 551 6,612 12 12 12 12 12 12 2H1002 Crushed stone for foundation Nos 1,992 41.01 492 61,046 166 2H1003 Lean concrete Nos 108,792 790.92 9,491 1,247,717 9,066 2H1004 Reinforcement bar Nos 8,448 68.57 823 107,189 704 2H1005 Corner angle Nos 59,688 1,204.01 14,448 1,793,462 2H1006 Concrete placing 2H1007 Backfill sand and compaction 4,974 Nos 560, 549 12 3,558 42,696 359.62 4,315 Nos 299,304 2,594.86 31,138 24,942 Sub Total for This Page 4,035,902 4,035,90

Total for Bill No. 2H10

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Bill No 2H11 MANHOLE TYPE 2-C WITH GRATING COVER AND CONCRETE COVER

T) 4 17	DESCRIPTION	UNIT	QUANTITY	FOREIGN ((YEN		LOCAL CUF (US\$		TOTAL AMOUNT IN
PAY ITEM	DESCRIPTION			UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
H1101 H1102 H1103 H1104 H1105 H1106	MANHOLE TYPE C WITH GRATING COVER AND CONCRETE COVER Excavation and Disposal Crushed stone for foundation Lean concrete Reinforcement bar Corner angle Concrete placing Backfill sand and compaction		4 4 4 4 4 4 4	8,528 529 177 11,495 676 7,162 5,124	2,116 708 45,980 2,704 28,648	$172.41 \\ 18.53 \\ 60.40 \\ 1,115.42 \\ 75.46 \\ 2,037.33 \\ 539.43$	690 74 242 4,462 302 8,149 2,158	1,006,5
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				33,691	134,764	4,018.98	16,076 for This Page	2,063,

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Bill No 2H12 TRENCH TYPE 1 WITHOUT COVER

US\$=¥120 FOREIGN CURRENCY LOCAL CURRENCY TOTAL AMOUNT (YEN) (US\$) IN PAY DESCRIPTION UNIT QUANTITY UNIT COST UNIT COST AMOUNT (YEN) ITEM AMOUNT 2H12 TRENCH TYPE 1 WITHOUT COVER 238,650 2H1201 Excavation and Disposal 1,110 72,150 1,388 M 65 1.25 182,928 2H1202 Crushed stone for foundation 1,110 34 37,740 1.09 1,210 M 2H12O3 Reinforcement bar 1,110 118 130,980 12.40 13,764 1,782,660 М 42,979 2H1204 Concrete placing M 1,110 206 228,660 38.72 5,386,164 387,612 2H1205 Backfill sand and compaction M 1,110 54 59,940 2.46 2,731 55.92 477 529,470 62,071 Sub Total for This Page 7,978,014

Total for Bill No. 2H11

7,978,014

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Bill No 2H13 TRENCH TYPE 1 WITH CONCRETE COVER

		UNIT		FOREIGN CU		LOCAL CUI	TOTAL AMOUNT	
PAY ITEM	DESCRIPTION		QUANTITY	(YEN) UNIT COST	AMOUNT	US\$ UNIT COST	AMOUNT	IN (YEN)
H1301 H1302 H1303 H1304	ENCH TYPE 1 WITH CONCRETE COVER Excavation and Disposal Crushed stone for foundation Reinforcement bar Concrete placing Backfill sand and compaction	M M M M	2,902 2,902 2,902 2,902 2,902 2,902	65 34 118 232 54	188,630 98,668 342,436 673,264 156,708	1.25 1.09 15.76 59.93 2.69	3,628 3,163 45,736 173,917 7,806	623,9 478,2 5,830,6 21,543,2 1,093,4
				503	1,459,706	80.72	234,249	29,569,

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Bill No 2H14 TRENCH TYPE 1 WITH GRATING COVER

US\$=¥120 FOREIGN CURRENCY LOCAL CURRENCY TOTAL AMOUNT QUANTITY (YEN) (US\$) IN PAY DESCRIPTION UNIT (YEN) UNIT COST AMOUNT UNIT COST AMOUNT ITEM 2H14 TRENCH TYPE 1 WITH GRATING COVER 66,220 2H1401 Excavation and Disposal M 308 65 20,020 1.25385 336 50,758 308 34 10,4721.09 2H1402 Crushed stone for foundation Μ 494,648 3,819 308 118 36,344 12.40 2H1403 Reinforcement bar М 6,858,790 308 232 71,456 183.64 56,561 2H1404 Concrete placing Μ 702 100,901 2H1405 Backfill sand and compaction 308 54 16,632 2.28 М 503 200.66 61,803 154,924Sub Total for This Page 7,571,318 7,571,318

Total for Bill No. 2H13

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Bill No 2H15 TRENCH TYPE 2 WITHOUT COVER

US\$=¥120

PAY	DESCRIPTION	UNIT	QUANTITY	FOREIGN (YE	N)	LOCAL CUI (US\$		TOTAL AMOUNT IN
ITEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)
2H1501 2H1502 2H1503 2H1504	RENCH TYPE 2 WITHOUT COVER Excavation and Disposal Crushed stone for foundation Reinforcement bar Concrete placing Backfill sand and compaction	M M M M	355 355 355 355 355 355	41 148 206	14,555 52,540 73,130	1.33 16.22 52.84	1,427 472 5,758 18,758 1,747	71,213 743,512 2,324,114
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1.1				709	251,695	79.33	28,162	
أنكل بغميب بيريس			·				for This Page Bill No. 2H14	

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Bill No 2H16 TRENCH TYPE 2 WITH CONCRETE COVER

US\$=¥120 FOREIGN CURRENCY LOCAL CURRENCY TOTAL AMOUNT PAY DESCRIPTION UNIT QUANTITY (YEN) (US\$) IN ITEM UNIT COST UNIT COST (YEN) AMOUNT AMOUNT 2H16 TRENCH TYPE 2 WITH CONCRETE COVER 2H1601 Excavation and Disposal 2H1602 Crushed stone for foundation М 133,515 444,663 645 207 4.02 2,593 26,445 1.33 129,387 M 645 41 858 2H1603 Reinforcement bar 1,350,888 6,255,339 25,460 10,462 M 645 16.22 1482H1604 Concrete placing 247 159,315 78.76 50,800 М 645 2H1605 Backfill sand and compaction 645 107 69,015 3.72 2,399 356,943 М 750 483,750 104.05 67,112 8,537,220 Sub Total for This Page 8,537,220

Total for Bill No. 2H15

Bill No 2H17 TRENCH TYPE 2 WITH GRATING COVER

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US\$=¥120

PAY	DESCRIPTION			UNIT	QUANTI	ITY		(YEN	URRENCY ()	LOCAL CU	\$)	TOTAL AMOUNT
ITEM						UNIT	COST	AMOUNT	UNIT COST	AMOUNT	(YEN)	
2H1701 2H1702 2H1703 2H1704	RENCH TYPE 2 WITH GRATING COVER Excavation and Disposal Crushed stone for foundation Reinforcement bar Concrete placing Backfill sand and compaction	· · ·		M M M M		650 650 650 650 650		207 41 148 247 107	134,550 26,650 96,200 160,550 69,550	1.33 16.22 257.34	2,613 865 10,543 167,271 2,451	130,390
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								750	487,500	282.68	183,742	
	L							100	401,000	Sub Total	for This Page Bill No. 2H16	

PAY	DESCRIPTION	UNIT	QUANTITY		CURRENCY (EN)	LOCAL CUR (US\$		TOTAL AMOUNT IN
I TEM				UNIT COST	AMOUNT	UNIT COST	AMOUNT	<u>(YEN)</u>
	IGATION AIDS							
	Lighthouse	Set	1	37,900,000	37,900,000	800.00	800	37,996,0
	Light beacon	Set	3	1,080,000	3,240,000	160.00	480	3,297,6
	Channel entrance marker buoy(high wave type)	Set Set	· · Z	4,600,000	9,200,000 32,200,000	1,600.00	3,200	
	Channel marker buoy(high wave type) Channel marker buoy	Set	1 	4,600,000 3,800,000	19,000,000	1,600.00 1,600.00	11,200 8,000	33,544,0 19,960,0
	Basin marker buoy	Set	. 9	3,600,000	7,200,000	1,600.00	3,200	7,584,0
	AIS base unit and VTS display	Set	1	5,000,000	5,000,000	1,000.00	3,200	5,000,0
	Spare parts for 5 years operation for above instrument	Set	. 1	30,000,000	30,000,000		Ő	30,000,0
	VHF radio	Set	. 2	150,000	300,000	1	ŏ	300,(
1	Anemometer	Set	1	1,800,000			Ō	1,800,0
	Barometer	Set	1	300,000			. 0	300,(
	Clock	Set	1	10,000			0	10,(
	Binocular	Set	1	35,000			· 0	35,(
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	·				146,185,000		26,880 of This Page	149,410,6

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US\$=¥120

PAY I TEM	DESCRIPTION	UNIT	QUANTITY	QUANTITY FOREIGN CURRENCY (YEN)		LOCAL CURRENCY (US\$)		TOTAL AMOUNT IN	
				UNIT COST	AMOUNT	UNIT COST	AMOUNT	(YEN)	
j J01	SUPPLY AND INSTALL OF SECURITY FENCE Supply and install of security fence	М	1,362	46	62,652	39.03	53,159	6,441,71	
								· · ·	
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		1	-			Sub tota Total of Sub.	al of This Page Section 2J	6,441,71 6,441,71	