

THE REPUBLIC OF ECUADOR

C R M

Centro de Rehabilitación de Manabi

WATER TRANSBASIN PROJECT FOR CHONE - PORTOVIEJO RIVER BASINS

TENDER DOCUMENTS
FOR
CONSTRUCTION OF CIVIL WORKS

PACKAGE 2

LA ESPERANZA ~ POZA HONDA TRANSBASIN
AND
POZA HONDA ~ MANCHA GRANDE TRANSBASIN

VOLUME - II

FORMS

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 - EQUIPMENT TO BE USED IN THE WORK FRONTS
 - LIST OF SUB-CONTRACTORS PARTICIPATE IN THE CONTRACT
-

MARCH 1995



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REPUBLIC OF ECUADOR

OECE LOAN No. _____

CENTRO DE REHABILITACION DE MANABI

CRM

WATER TRANSBASIN PROJECT FOR CHONE-PORTOVIEJO RIVER BASINS

INTERNATIONAL TENDERING No. _____

CONSTRUCTION OF CIVIL WORKS

PACKAGE 2

LA ESPERANZA-POZA HONDA TRANSBASIN
AND
POZA HONDA-MANCHIA GRANDE TRNSBASIN

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PRESENTATION AND COMMITMENT LETTER

Gentlemen
Centro de Rehabilitación de Manabí
Portoviejo

REF.: PRESENTATION AND COMMITMENT LETTER

The undersigned _____
(Name of the Legal or Sole Representative)

Representative of _____
(Name of the Firm or Constituted Association)

domiciled in _____

interested in participating in the Tendering No. _____, I present the required documentation, according to the instructions contained in the Tender Documents received from CRM, in order to participate in the Tendering for the Construction of the Civil Works, Package 2; La Esperanza~Poza Honda Transbasin and Poza Honda~Mancha Grande Transbasin of the Water Transbasin Project for Chone-Portoviejo River Basins.

The Representative undersigned, acting for and on behalf of _____
(Denomination of the Firm or Association)

- (1) Declares to have thoroughly examined the Tender Documents, and accepts to obey to the requirements and other conditions of these Documents.
- (2) Guarantees the truthfulness and accuracy of all the declarations and answers done in the attached Documents.
- (3) Authorizes CRM or to whom it may delegate, to carry out investigations to prove the truthfulness of the declarations and Documents submitted and for obtaining clarifications and information about the technical and economical conditions of this Firm or Association.

- (4) Accepts unconditionally CRM's decision about the Tendering and waives to any claim, as tendered when submitting this Tender and in case to result as granted will sign the Contract in the date when the term is due for the revision of the report provided in the Law presenting for the celebration of the Contract and the Bonds required by the Law.
- (5) Waives expressly to use the diplomatic ways, for any matter related to the Tendering.
- (6) Besides manifests that has visited the Project sites and that has verified the natural conditions, the existing access roads, and the other factors that could influence the costs of the Tender; and that knows and becomes subject to the prevailing Laws of Ecuador.

The address and domicile of the Tenderer in Ecuador, for matters related with this Tender, to which CRM can send its correspondence, is as follows:

In case of an Association, include the following paragraphs:

Address:
Postal:
Cable:
Telex:
Fax:
Telephone:

The Association that presents the documentation attached herewith is composed of the following firms:

- a.
- b.
- c.
- d.

Accepts that the responsibility of each one of the member Firms of the Association will be indivisible and solidly, and is subject to the prevailing Laws of Ecuador.

Place and Date

Legal Representative

TENDER BOND

WHEREAS _____
(hereinafter called "the Tenderer") has presented his proposal dated _____ for
the Construction of Civil Works, Package 2: La Esperanza~Poza Honda Transbasin and
Poza Honda~Mancha Grande Transbasin of the Water Transbasin Project for Chone-
Portoviejo River Basins (hereinafter called "the Tender") BY THE PRESENT we leave on
record that _____ of

_____ of
with legal domicile in _____ (hereinafter called "the Bank")
has committed in an obligation with Centro de Rehabilitación de Manabí (hereinafter called
"CRM") for the amount of _____ whose payment in due form will be
made to CRM by the Bank to its successors or cessionaries, in accordance with this
document.

Issued and signed with the seal of this Bank on the _____ of
_____ of 199_____.

The present obligation is subject to the following conditions:

- (1) If the Tenderer withdraws its Tender during the stipulated validity period in the
Tender Form; or
- (2) If the Tenderer, after being notified of the acceptance of his Tender by CRM during
the validity period of the same.
 - (a) Does not sign the contract
 - (b) Does not provide the performance bond, in accordance with the Instructions
to the Tenderers.

We, the undersigned, are obliged to pay to CRM up to the total amount indicated on
delivery of its first requirement by writing, without CRM having to justify such
requirement: CRM will have to notify that the amount required is the amount owed, by
reason of one or both of the conditions specified before and will indicate expressly the
condition that has been complied.

This bond will stay in force up to thirty (30) days after the validity period of the Tender, and all requirements related to it must be received by the Bank at the latest on that date.

Signature of the Bank

Signature of the Witness

Name of the Witness _____

Address of the Witness _____

VALUED SCHEDULE

TENDERER: _____
 EXECUTION TERM: _____
 WORK AMOUNT: _____
 STARTING DATE: _____

WORK DESCRIPTION	TOTAL PRICE	% OF TOTAL COST	MONTHLY VALUES PER ITEM IN SUCRES AND FOREIGN CURRENCY MONTHS ACCOUNTED FROM THE COMMENCEMENT ORDER																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TOTAL COST																				
TOTAL PROGRESS (% ACCUMULATED)																				
ACCUMULATED INVESTMENTS IN THOUSAND SUCRES																				

NOTE: All the registered items must be included in the Summary of Bill of Quantities.

 Place and date

 Legal Representative

VALUED SCHEDULE

TENDERER: _____ WORK AMOUNT: _____
 EXECUTION TERM: _____ STARTING DATE: _____

WORK DESCRIPTION	TOTAL PRICE	% OF TOTAL COST	MONTHLY VALUES PER ITEM IN SUCRES AND FOREIGN CURRENCY MONTHS ACCOUNTED FROM THE COMMENCEMENT ORDER																	
			19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
TOTAL COST																				
TOTAL PROGRESS (% ACCUMULATED)																				
ACCUMULATED INVESTMENTS IN THOUSAND SUCRES																				

NOTE: All the registered items must be included in the Summary of Bill of Quantities.

Place and date

Legal Representative

VALUED SCHEDULE

TENDERER: _____
EXECUTION TERM: _____

WORK AMOUNT: _____
STARTING DATE: _____

WORK DESCRIPTION	TOTAL PRICE	% OF TOTAL COST	MONTHLY VALUES PER ITEM IN SUCRES AND FOREIGN CURRENCY MONTHS ACCOUNTED FROM THE COMMENCEMENT ORDER																	
			37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
TOTAL COST																				
TOTAL PROGRESS (% ACCUMULATED)																				
ACCUMULATED INVESTMENTS IN THOUSAND SUCRES																				

NOTE: All the registered items must be included in the Summary of Bill of Quantities.

Place and date

Legal Representative

**CAMP AREA AND TEMPORARY
INSTALLATIONS**

**AREA REQUIRED FOR CONSTRUCTION CAMPS OF THE
CONTRACTOR AND TEMPORARY INSTALLATIONS**

**Detail the main characteristics of the following items of the Bill of
Quantities**

I/01	I/02	I/03
I/04	I/05	I/09
I/11	I/12	

Note: The detail must be done in pages duly signed by the Legal Representative

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
1.	GENERAL ITEMS	CFC	S/.	S/.
2.	SEVERINO PUMPING STATION			
2.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER	CFC	S/.	S/.
2.2	EARTH WORKS	CFC	S/.	S/.
2.3	CONCRETE WORKS	CFC	S/.	S/.
2.4	ROAD WORKS	CFC	S/.	S/.
2.5	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
2.6	BUILDING WORKS	CFC	S/.	S/.
2.6.1	Pump House	CFC	S/.	S/.
2.6.2	Plumbing Works	CFC	S/.	S/.
2.6.3	Air Conditioning and Ventilation Works	CFC	S/.	S/.
2.6.4	Diesel Generator House	CFC	S/.	S/.
	Sub-Total of Item 2.6	CFC	S/.	S/.
2.7	ELECTRICAL WORKS			
2.7.1	Panel	CFC	S/.	S/.
2.7.2	Lighting Fixtures	CFC	S/.	S/.
2.7.3	Others	CFC	S/.	S/.
2.7.4	Piping	CFC	S/.	S/.
2.7.5	Wiring and Cabling	CFC	S/.	S/.
2.7.6	Telephone Facilities	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
2.7.7	Earthing System	CFC	S/.	S/.
	Sub-Total of Item 2.7	CFC	S/.	S/.
2.8	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 2	CFC	S/.	S/.
3.	SEVERINO PENSTOCK			
3.1	EARTH WORKS	CFC	S/.	S/.
3.2	CONCRETE WORKS	CFC	S/.	S/.
3.3	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
	TOTAL OF ITEM 3	CFC	S/.	S/.
4.	SEVERINO HEAD TANK			
4.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER	CFC	S/.	S/.
4.2	EARTH WORKS	CFC	S/.	S/.
4.3	CONCRETE WORKS	CFC	S/.	S/.
4.4	DRAINAGE	CFC	S/.	S/.
4.5	ROAD WORKS	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
4.6	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
TOTAL OF ITEM 4				
5.	SEVERINO SUBSTATION			
5.1	EARTH WORKS	CFC	S/.	S/.
5.2	CONCRETE WORKS	CFC	S/.	S/.
5.3	ROAD WORKS	CFC	S/.	S/.
5.4	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
TOTAL OF ITEM 5				
6.	SEVERINO OPEN CHANNEL			
6.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER	CFC	S/.	S/.
6.2	EARTH WORKS	CFC	S/.	S/.
6.3	CONCRETE WORKS	CFC	S/.	S/.
6.4	DRAINAGE	CFC	S/.	S/.
6.5	ROAD WORKS	CFC	S/.	S/.
6.6	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
TOTAL OF ITEM 6				

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
7.	LA ESPERANZA-POZA HONDA DIVERSION TUNNEL			
7.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER	CFC	S/.	S/.
7.2	EARTH WORKS	CFC	S/.	S/.
7.3	DRILLING AND GROUTING WORKS	CFC	S/.	S/.
7.4	CONCRETE WORKS	CFC	S/.	S/.
7.5	CONVERGENCE MEASUREMENTS	CFC	S/.	S/.
	TOTAL OF ITEM 7	CFC	S/.	S/.
8.	POZA HONDA-MANCHA GRANDE DIVERSION TUNNEL			
8.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER	CFC	S/.	S/.
8.2	EARTH WORKS	CFC	S/.	S/.
8.3	DRILLING AND GROUTING WORKS	CFC	S/.	S/.
8.4	CONCRETE WORKS	CFC	S/.	S/.
8.5	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
8.6	CONVERGENCE MEASUREMENTS	CFC	S/.	S/.
8.7	BUILDING WORKS OF POZA HONDA INLET SUPERSTRUCTURE	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
8.8	ELECTRICAL WORKS	CFC	S/.	S/.
8.9	MISCELLANEOUS	CFC	S/.	S/.
TOTAL OF ITEM 8		CFC	S/.	S/.
9.	LA SECA WORK ADIT			
9.1	EARTH WORKS	CFC	S/.	S/.
9.2	CONCRETE WORKS	CFC	S/.	S/.
TOTAL OF ITEM 9		CFC	S/.	S/.
10.	LOS CUYUYES WORK ADIT			
10.1	EARTH WORKS	CFC	S/.	S/.
10.2	CONCRETE WORKS	CFC	S/.	S/.
TOTAL OF ITEM 10		CFC	S/.	S/.
11.	POZA HONDA WORK ADIT			
11.1	EARTH WORKS	CFC	S/.	S/.
11.2	CONCRETE WORKS	CFC	S/.	S/.
TOTAL OF ITEM 11		CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
12.	SEVERINO ACCESS ROAD			
12.1	EARTH WORKS	CFC	S/.	S/.
12.2	EXCAVATION AND FILLING FOR STRUCTURES	CFC	S/.	S/.
12.3	CULVERT AND DRAINAGE WORKS	CFC	S/.	S/.
12.4	CONCRETE WORKS	CFC	S/.	S/.
12.5	PAVEMENT	CFC	S/.	S/.
12.6	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 12	CFC	S/.	S/.
13.	CAÑA DULCE INLET ACCESS ROAD			
13.1	EARTH WORKS	CFC	S/.	S/.
13.2	EXCAVATION AND FILLING FOR STRUCTURE	CFC	S/.	S/.
13.3	CULVERT AND DRAINAGE WORKS	CFC	S/.	S/.
13.4	CONCRETE WORKS	CFC	S/.	S/.
13.5	PAVEMENT	CFC	S/.	S/.
13.6	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 13	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
14.	LA SECA ACCESS ROAD			
14.1	EARTH WORKS	CFC	S/.	S/.
14.2	EXCAVATION AND FILLING FOR STRUCTURES	CFC	S/.	S/.
14.3	CULVERT AND DRAINAGE WORKS	CFC	S/.	S/.
14.4	CONCRETE WORKS	CFC	S/.	S/.
14.5	PAVEMENT	CFC	S/.	S/.
14.6	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 14	CFC	S/.	S/.
15.	LOS CUYUYES ACCESS ROAD			
15.1	EARTH WORKS	CFC	S/.	S/.
15.2	EXCAVATION AND FILLING FOR STRUCTURES	CFC	S/.	S/.
15.3	CULVERT AND DRAINAGE WORKS	CFC	S/.	S/.
15.4	CONCRETE WORKS	CFC	S/.	S/.
15.5	PAVEMENT	CFC	S/.	S/.
15.6	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 15	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
16.	POZA HONDA INLET ACCESS ROAD			
16.1	EARTH WORKS	CFC	S/.	S/.
16.2	EXCAVATION AND FILLING WORKS	CFC	S/.	S/.
16.3	CULVERT AND DRAINAGE WORKS	CFC	S/.	S/.
16.4	CONCRETE WORKS	CFC	S/.	S/.
16.5	PAVEMENT	CFC	S/.	S/.
16.6	MISCELLANEOUS	CFC	S/.	S/.
	TOTAL OF ITEM 16	CFC	S/.	S/.
17.	DAULE-PERIPA 138 KV SWITCHGEAR YARD			
17.1	EARTH WORKS	CFC	S/.	S/.
17.2	CONCRETE WORKS	CFC	S/.	S/.
17.3	MISCELLANEOUS METAL WORKS	CFC	S/.	S/.
	TOTAL OF ITEM 17	CFC	S/.	S/.
	GRAND TOTAL	CFC	S/.	S/.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Foreign Currency (CFC)	Local Currency (S/.)	Total Equivalent Price (S/.)
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The Tenderer shall state the proportion of Ecuadorian Sucres and Japanese Yens for Payments.

Ecuadorian Sucres Portion	S/.	_____	_____ %
Japanese Yen Portion	¥	_____	_____ %
		_____	100 %

Rate of exchange of _____ (The date informed by CRM)

One (1) Ecuadorian Sucre is equivalent to _____ Japanese Yens

Where,

S/ _____ = C.F.C. = ¥ _____

SUMMARY OF BILL OF QUANTITIES

Description of Works	Foreign Currency (US\$)		Local Currency (S/.)		Total Equivalent (S/.)	
	Amount	(4)	Amount	(6)	Amount	(8)
1. GENERAL ITEMS						
2. SEVERINO PUMPING STATION						
3. SEVERINO PENSTOCK						
4. SEVERINO HEAD TANK						
5. SEVERINO SUBSTATION						
6. SEVERINO OPEN CHANNEL						
7. LA ESPERANZA-POZA HONDA DIVERSION TUNNEL						
8. POZA HONDA-MANCHA GRANDE DIVERSION TUNNEL						
9. LA SECA WORK ADIT						
10. LOS CUYYES WORK ADIT						

SUMMARY OF BILL OF QUANTITIES

Description of Works	Foreign Currency (US\$)		Local Currency (S/.)		Total Equivalent (S/.)	
	Amount	(4)	Amount	(6)	Amount	(8)
11. POZA HONDA WORK ADIT						
12. SEVERINO ACCESS ROAD						
13. CA—A DULCE INLET ACCESS ROAD						
14. LA SECA ACCESS ROAD						
15. LOS CUYUYES ACCESS ROAD						
16. POZA HONDA INLET ACCESS ROAD						
17. DAULE-PERIPA 138 KV SWITCHGEAR YARD						
GRAN TOTAL						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. GENERAL ITEMS										
/01	Construction, operation, * maintenance and subsequent removal of the Contractor's offices, staff quarters, repair shop, stores, laboratory buildings, motor pools, labour camps, etc., including land clearing, drainage and adequate fencing	A.4.3	L.S.							
/02	Installation, operation, * maintenance and subsequent removal of temporary water supply systems for and in the Contractor's offices, laboratory, staff quarters, repair shops, motor pools, etc., and construction site	A.4.4	L.S.							
/03	Installation, operation, * maintenance and subsequent removal of temporary electric power supply system to the									

* Contractor estimate your needs, detailing your unit prices.

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Contractor's offices, laboratory, staff quarters, labour camps, repair shops, motor pools, etc., and construction site	A.4.5	L.S.							
/04	Installation, operation, * maintenance and subsequent removal of temporary telecommunication systems from the CRM's and Supervisor's offices to the Contractor's offices, quarters, etc., including wired telephone line, VHF radio communication system and handy talky	A.4.6	L.S.							
/05	Construction, operation, * maintenance and subsequent removal of the Contractor's temporary construction roads to the various working areas; maintenance of the existing roads including temporary supports to strengthen piers of the existing bridges, etc.	A.4.7	L.S.							
/06	Provision and maintenance of									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
/07	the laboratory equipment and furnitures including provision of necessary testing experts and labour to assist the Supervision Exploratory boring and excavation of test pits	A.5.1 A.4.12	Provisional sum Provisional sum							
/08	Monument and memorial	A.8.2	Provisional sum							
/09	Construction, operation * maintenance and subsequent hand over to CRM the Supervision's office, first aid building, residence and housing; including land clearing and development, water supply system, sewage and drainage system, electric power supply system, telecommunication system including telephone, fax and VHF radio system, and adequate fencing									
/10	Provision, maintenance and subsequent hand over	A.6.5	L.S.							

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	to CRM the Supervisions office furnitures such as desks, tables, shelves, etc.; office equipment such as computer, printer, etc.; and survey equipment	A.6.5	Provisional sum							
/11	Provision, operation and * maintenance of the first aid facilities and medicines including operation of medical services by one doctor, two nurses and one clerk	A.4.8	L.S.							
/12	Provision, operation and * maintenance of vehicles for CRM and the Supervision	A.6.5	L.S.							
TOTAL OF ITEM 1										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
2.	SEVERINO PUMPING STATION									
2.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER									
/01	Care of water during construction in open air construction site	B.2.4	L.S.							
	Subtotal of Item 2.1									
2.2	EARTH WORKS									
/01	Clearing the site for construction of pumping station	C.2.3	m ²	16,260						
/02	Open-cut excavation, in common, in and around pumping station	C.5.5	m ³	43,790						
/03	Open-cut excavation, in weathered rock, in and around pumping station	C.5.5	m ³	226,690						
/04	Open-cut excavation, in									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
/05	rock, in and around pumping station Trench excavation, all classes, for drain ditch, catch basin and foundation of wire net fence	C.5.5	m ³	56,670						
/06	Free draining backfill	C.7.6	m ³	244						
/07	Backfilling for pumping station	C.7.6	m ³	28,640						
/08	Gravel bedding for drain ditch and catch basin	C.7.6	m ³	14						
/09	Sod facing for cut slope protection	C.20.2	m ²	2,240						
Subtotal of Item 2.2										
2.3 CONCRETE WORKS										
/01	Concrete, class E, for bottom slab of inlet channel	E.12	m ³	513						
/02	Concrete, class B, for wall, in contact with ground	E.12	m ³	12,920						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Concrete, class B, for column, in contact with ground	E.12	m ³	713						
/04	Concrete, class B, for slab and sump pit, in contact with ground	E.12	m ³	3,860						
/05	Concrete, class B, for wall	E.12	m ³	1,530						
/06	Concrete, class B, for column	E.12	m ³	2,920						
/07	Concrete, class B, for beam and slab	E.12	m ³	2,650						
/08	Concrete, class B, for crane girder	E.12	m ³	198						
/09	Concrete, class B, for wall of valve room and foundation of valve	E.12	m ³	1,970						
/10	2nd stage concrete, class A, for foundation of pump and motor	E.12	m ³	827						
/11	2nd stage concrete,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	class A, for blockouts of gate, trashrack, girder and crane rail	E.12	m ³	201						
/12	Concrete, class E, for encasing of penstock pipe	E.12	m ³	613						
/13	Backfill concrete, class G	E.12	m ³	1,580						
/14	Concrete, class F, for drain ditch and catch basin	E.12	m ³	362						
/15	Concrete, class H, for levelling concrete for bottom slab of inlet channel, drain ditch and catch basin	E.12	m ³	72						
/16	Concrete, class G, for anchor block of trash boom and foundation concrete of wire net fence	E.12	m ³	200						
/17	Formwork, F1 finish, for concrete of Items /01, /02, /03, /04, /07, /12, and /13	E.13.8	m ²	5,190						
/18	Formwork, F1 finish, for concrete of item /14	E.13.8	m ²	1,320						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/19	Formwork, F1 finish, for concrete of Item /16	E.13.8	m ²	164						
/20	Formwork, F2 finish, for concrete of Items /02, /05, /06, /07, /08, /09, /10 and /11	E.13.8	m ²	12,830						
/21	Formwork, F3 finish, for concrete of Items /04, /05, /06, /10 and /11	E.13.8	m ²	3,090						
/22	Formwork, F3 finish, for concrete of Item /14	E.13.8	m ²	963						
/23	Reinforcing bars for concrete works	E.14.3	ton	1,655.4						
/24	P.V.C. waterstop, type A (W= 300 mm)	E.22.4	m	76						
/25	P.V.C. waterstop, type B (W= 200 mm)	E.22.4	m	10						
/26	Bituminous coating for contraction joint of bottom slab of inlet channel and									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	penstock pipe	E.25.2	m ²	267						
/27	Joint filler, t= 10 mm for expansion joint of substructure of pump house	E.24.3	m ²	680						
/28	Dowel bar, D.22 mm (round bar) for bottom slab of inlet channel	E.26.3	ton	232.4						
/29	Anchor bar, D.25 mm for encasing concrete	E.27.3	m	324						
/30	Shotcrete with wire mesh for cut slope protection, t= 100 mm	E.17.6	m ²	10,120						
/31	Contact grouting for penstock pipe	D.8.1	L.S.							
/32	P.V.C. pipe, D.75 mm for weep hole in wing wall, including sand and gravel filter	F.4.3	m	244						
/33	P.V.C. pipe, D.50 mm for weep hole in shotcrete									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	protection, including sand and gravel filter	F.4.3	m	350						
/34	P.V.C. pipe, D.100 mm for drain	F.4.3	m	69						
Subtotal of Item 2.3										
2.4	ROAD WORKS									
/01	Asphalt concrete surface course around pumping station at EL. 70.000 m	G.10.4	m ³	157						
/02	Asphalt stabilised subbase course	G.10.3	m ³	157						
/03	Prime coat	G.10.2	lit	3,140						
/04	Tack coat	G.10.2	lit	4,710						
Subtotal of Item 2.4										
2.5	MISCELLANEOUS METAL WORKS									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/01	Embedded metal	H.13.2	kg	7,970						
/02	Steel grating for drain ditch	H.10.2	kg	6,640						
/03	Steel pipe, D.100 mm for air pipe	H.11.2	kg	1,690						
/04	Checkered plate	H.10.2	kg	3,000						
/05	Steel pipes for water level gauge, D.500 mm	H.11.2	kg	1,830						
/06	Wire net fence with gate	H.12.2	kg	320						
/07	Round bar for step ladder	H.9.2	kg	60						
/08	Steel pipe for drainage of gantry crane rail, D.50 mm	H.11.2	kg	115						
Subtotal of Item 2.5										
2.6 BUILDING WORKS										
2.6.1 PUMP HOUSE										
Concrete Works										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/01	Concrete, class C, for superstructure	E.12	m ³	822						
/02	Concrete, class A, for stair case at substructure and for secondary concrete around concrete block wall	E.12	m ³	105						
/03	Concrete, class H, for covering concrete of roof	E.12	m ³	122						
/04	Formwork, F1 finish, for concrete of Item /01	E.13.8	m ²	3,300						
/05	Formwork, F3 finish, for concrete of Item /01	E.13.8	m ²	2,360						
/06	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	909						
/07	Formwork, F3 finish, for concrete of Item /02	E.13.8	m ²	155						
/08	Reinforcing bar, deformed for concrete works	E.14.3	ton	102						
/09	Welded mesh	E.28.2	m ²	1,522						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/10	Metal lath to water proof cement mortar	E.28.2	m ²	438						
/11	Foamed polyethylene, t= 50 mm to expansion joint	I.6.2	m ²	17						
Waterproofing Works										
/12	3-ply built-up asphalt roofing	I.6.2	m ²	1,640						
/13	2-ply built-up asphalt roofing	I.6.2	m ²	35						
/14	Waterproof cement mortar to drainage gutter in substructure	I.6.2	m ²	752						
/15	Asphalt compound joint, t= 25 mm to the covering concrete of roof	I.6.2	m	987						
/16	Polysulfide caulking, t= 20 mm	I.6.2	m	285						
/17	Polysulfide caulking to fixture, 10 x 7 mm	I.6.2	m	456						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Masonry Works										
/18	Concrete block masonry (fair faced)		m ²	1,615						
a.	150 mm walling to substructure, including bonding and filling cement mortar	1.6.2	m ²	1,615						
b.	100 mm walling to superstructure, including bonding and filling cement mortar	1.6.2	m ²	93						
Tile Works										
/19	Glazed ceramic tile	1.6.2	m ²	59						
/20	Terrazzo tile to floor	1.6.2	m ²	1,496						
/21	Mosaic tile	1.6.2	m ²	25						
/22	P.V.C. tile	1.6.2	m ²	400						
/23	Sprayed tile	1.6.2	m ²	1,740						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
In-situ Finishing Works										
/24	Cement mortar trowelled, t= 20 mm, applied to:									
a.	Reinforced concrete wall	1.6.2	m ²	3,847						
b.	Concrete block wall	1.6.2	m ²	1,614						
c.	Skirting, H= 100 mm	1.6.2	m	222						
d.	Skirting, H= 200 mm	1.6.2	m	78						
e.	Skirting, H= 300 mm	1.6.2	m	120						
/25	Cement mortar trowelled, t= 30 mm, applied to:									
a.	Reinforced concrete floor	1.6.2	m ²	1,496						
b.	Stair-case	1.6.2	m ²	156						
/26	Cement mortar screed, t= 20 mm, applied to:									
a.	Built-up asphalt roofing	1.6.2	m ²	1,523						
/27	Cement mortar bed,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	applied to:									
a.	Glazed ceramic tile	1.6.2	m ²	59						
b.	Terrazzo tile	1.6.2	m ²	1,496						
c.	Asphalt block tile	1.6.2	m ²	13						
d.	P.V.C. tile	1.6.2	m ²	191						
e.	Mosaic tile	1.6.2	m ²	25						
728	Steel trowel finish to exposed concrete:									
a.	Floor (class U3)	1.6.2	m ²	109						
b.	Covering concrete of roof (class U2)	1.6.2	m ²	1,523						
729	Terrazzo border	1.6.2	m	273						
730	Terrazzo skirting. H= 100 mm	1.6.2	m	502						
731	Terrazzo to corner frame to elevator door	1.6.2	m	24						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/32	Coloured cement spray	I.6.2	m ²	2,766						
Interior Finishing Works										
/33	Asbestos cement sheet ceiling, t= 6 mm including wood ceiling suspension system	I.6.2	m ²	35						
/34	Acoustic rockwool tile ceiling, t= 12 mm including wood ceiling suspension system with gypsum board 9 mm thick laid on acoustic rockwool tile	I.6.2	m ²	308						
/35	Acid-proof asphalt block to floor of battery room	I.6.2	m ²	18						
Painting Works										
/36	Oil paint applied to:									
a.	Steel handrail	I.6.2	m ²	300						
b.	Caged ladder	I.6.2	m ²	9						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
c.	Steel door leaves and frame	I.6.2	m ²	159						
d.	Wooden surface	I.6.2	m ²	85						
e.	Cupboard and shelf	I.6.2	m ²	1						
/37	Vinyl emulsion paint applied to:									
a.	Asbestos cement sheet ceiling	I.6.2	m ²	35						
b.	Cement mortar plastered wall, skirting	I.6.2	m ²	5,438						
/38	Acid-proof paint applied to:									
a.	Cement mortar plastered wall and ceiling	I.6.2	m ²	81						
/39	Wooden doors and frames including required hardware and accessories	I.6.2	m ²	19						
/40	Cupboard and Shelf	I.6.2	nos.	1						
/41	Blind box, 165 x 150 mm deep	I.6.2	m	20						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Steel Door										
/42	Steel door and louver including frames, required hardware and accessories	I.6.2	m ²	54						
/43	Motor driven rolling shutter (SS/1) including guide rail, head box, hardware and accessories	I.6.2	nos.	1						
Aluminium Door, Windows and Louvers										
/44	Aluminium door leaves and frame including required hardware and accessories	I.6.2	m ²	12						
/45	Aluminium window and frame including required hardware and accessories	I.6.2	m ²	182						
/46	Aluminium louver and frames including required hardware and accessories	I.6.2	m ²	0.5						
Glazing Works										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/47	Clear wire glass, t= 6.8 mm including glazing bead	I.6.2	m ²	144						
/48	Figured sheet glass, t= 4 mm including glazing bead	I.6.2	m ²	13						
/49	Clear sheet glass, t= 6 mm	I.6.2	m ²	11						
Miscellaneous Metal Works										
/50	Steel pipe handrail including baluster									
a.	Type A	I.6.2	m	120						
b.	Type B	I.6.2	m	37						
c.	Type C	I.6.2	m	152						
d.	Removable type	I.6.2	m	19						
/51	Caged ladder	I.6.2	kg	1,500						
/52	Steel made door mat,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1,500 x 600 mm	I.6.2	nos.	1						
/53	Steel pipe embedded in concrete, D.100 mm	I.6.2	m	100						
/54	Parapet ring	I.6.2	nos.	15						
/55	Grating steel hatch cover, 2,500 mm long, 1,500 mm wide and 50 mm deep	I.6.2	nos.	1						
/56	Expansion joint cover to roof, parapet, stainless steel plate 1.5 mm thick, 330 mm wide including stiffener and anchored metal	I.6.2	m	6						
/57	Stainless nosing to stairs	I.6.2	m	325						
Miscellaneous Works										
/58	P.V.C. rain water pipe, D.100 mm	I.6.2	m	131						
/59	Kitchen sink	I.6.2	set	1						
/60	Wooden partition screen	I.6.2	m ²	10						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/61	Skylight with steel louvers	I.6.2	set	12						
/62	Cast iron made roof drain and floor drain:									
a.	Superstructure (roof drain, D.100 mm)	I.6.2	nos.	25						
b.	Substructure (floor drain, D.75 mm)	I.6.2	nos.	2						
/63	P.V.C. drain pipe, D.50 mm from door mat	I.6.2	m	5						
/64	Fire extinguisher, 4.5 kg CO2	I.6.2	nos.	18						
/65	Door signs	I.6.2	nos.	17						
Elevator Equipment										
/66	Elevator	I.6.2	L.S.							
Subtotal of Item 2.6.1										
2.6.2 PLUMBING WORKS										
Water Supply Works										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	pressure gauges, water feed pump and manual 4-way valve and accessories	1.9	set	1						
/06	Chlorinator, with hypochlorite solution retention tank (50 l) and accessories	1.9	set	1						
/07	Galvanized steel pipes including fittings, supports and accessories:									
a.	D.65 mm	1.9	m	130						
b.	D.50 mm	1.9	m	43						
c.	D.40 mm	1.9	m	253						
d.	D.32 mm	1.9	m	59						
e.	D.25 mm	1.9	m	12						
f.	D.20 mm	1.9	m	145						
/08	Bronze gate valve:									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
a.	D.65 mm	I.9	nos.	3						
b.	D.40 mm	I.9	nos.	1						
c.	D.32 mm	I.9	nos.	7						
d.	D.20 mm	I.9	nos.	13						
709	Flexible joint:									
a.	D.65 mm	I.9	nos.	2						
b.	D.50 mm	I.9	nos.	1						
c.	D.40 mm	I.9	nos.	2						
d.	D.32 mm	I.9	nos.	1						
710	P.V.C. pipes for soil waste water and vent pipe including fittings, supports, hangers and earth work:									
a.	D.110 mm	I.9	m	517						
b.	D.75 mm	I.9	m	36						
c.	D.50 mm	I.9	m	91						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/11	Floor trap, D.50 mm	1.9	nos.	5						
/12	Floor cleanout, D.110 mm	1.9	nos.	3						
/13	Floor cleanout, D.75 mm	1.9	nos.	3						
/14	Floor cleanout, D.50 mm	1.9	nos.	5						
/15	Faucet, D.13 mm	1.9	nos.	5						
/16	Check valve:									
a.	D.65 mm	1.9	nos.	2						
b.	D.40 mm	1.9	nos.	1						
c.	D.32 mm	1.9	nos.	6						
Plumbing Fixture										
/17	Water closet, wash down close coupled unit in vitreous china 9 litre cistern with plastic seat and cover with paper holder and accessories	1.9	nos.	2						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/18	Urinal, wall hung type heavy duty fireclay with integral cistern with trap complete	1.9	nos.	2						
/19	Lavatory sink with glass shelf and mirror, including accessories	1.9	nos.	2						
/20	Slop sink, including accessories	1.9	nos.	1						
/21	Shower set, including accessories	1.9	nos.	1						
/22	Towel rail 20 mm dia. x 600 mm long with CP brackets	1.9	nos.	1						
/23	Instantaneous electric water heater above sink type 7 litre 1.5 kW	1.9	nos.	2						
/24	Septic tank including water level switch and chemical solution: 30 litres	1.9	set	1						
/25	Catch basin with concrete cover	1.9	set	14						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/26	Cess pit with cast iron cover	1.9	set	1						
/27	Portable fire extinguisher, dry chemical powder type, capacity 6 kg, pressure 150 PSI	1.9	nos.	20						
/28	Fire hydrant box fabricated from zinked steel plate painted red, size 900 x 850 x 250 mm with hydrant valve D.40 mm, fire hose, nozzle and accessories	1.9	nos.	13						
/29	Fire hydrant pump, horizontal axle centrifugal type with power cable and control cable: Q= 300 lit/min. H= 60 m D= ϕ 65 mm dia. P= 220 V, 60 Hz, ϕ 3 Phases, 5.5 kW	1.9	nos.	1						
/30	Electrical control panel for above pump with indicator									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	lamps	I.9	set	2						
/31	Flow meter, D.50 mm	I.9	nos.	1						
/32	Pressure vessel with diaphragm test pressure, 10 bar capacity 500 litres	I.9	nos.	1						
/33	Auto air release, 15 mm	I.9	nos.	2						
/34	Pressure gauge (0-10 bar)	I.9	nos.	3						
/35	Hydrant test valve, D.40 mm	I.9	nos.	3						
Subtotal of Item 2.6.2										
2.6.3 AIR CONDITIONING AND VENTILATION WORKS										
/01	Packaged air conditioner, refrigeration capacity 45,600 kcal/hr., 9,460 CMH, heating capacity 16,340 kcal/hr., built in electric heater 19 kW, outdoor condensing units, 220 V, 3 ϕ , 60 Hz, prefilters 65 % cleanable	I.9	set	1						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/02	Packaged air conditioner, refrigeration capacity 19,700 kcal/hr., 3,580 CMH, heating capacity 6,450 kcal/hr., built in electric heater 7.5 kW, outdoor condensing units, 220 V, 3 ϕ , 60 Hz, prefilters 65 % cleanable	I.9	set	1						
/03	Multiblade fan, 38,000 CMH x 50 mm Aq. X 11 kW, 220 V, 3 ϕ , 60 Hz	I.9	nos.	2						
/04	Propeller fan exhaust type, explosion-proof ϕ 250 mm x 1,020 CMH x 3 mm Aq., 220 V, 1 ϕ , 60 Hz	I.9	nos.	1						
/05	Propeller fan exhaust type, ϕ 250 mm x 1,020 CMH x 3 mm Aq., 220 V, 1 ϕ , 60 Hz	I.9	nos.	1						
/06	Propeller fan exhaust type, ϕ 200 mm x 540 CMH x									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
	3 mm Aq., 220 V, 1 ϕ , 60 Hz	1.9	nos.	1						
/07	Ventilating registers									
a.	UR-VHS 500 x 200, Q = 500 CMH	1.9	nos.	6						
b.	UR-VHS 400 x 200, Q = 430 CMH	1.9	nos.	7						
c.	UR-VHS 850 x 300, Q = 1,790 CMH	1.9	nos.	6						
d.	UR-VHS 730 x 300, Q = 1,530 CMH	1.9	nos.	7						
e.	UR-VHS 900 x 300, Q = 2,200 CMH	1.9	nos.	6						
f.	UR-VHS 900 x 300, Q = 1,890 CMH	1.9	nos.	7						
g.	UR-VHS 900 x 250, Q = 1,540 CMH	1.9	nos.	6						
h.	UR-VHS 900 x 300, Q = 1,840 CMH	1.9	nos.	5						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
i.	UR-VHS 300 x 200, Q = 300 CMH	1.9	nos.	12						
/08	Return grilles									
a.	RG-950 x 400, Q = 2,020 CMH	1.9	nos.	3						
b.	RG-900 x 400, Q = 1,825 CMH	1.9	nos.	1						
c.	RG-750 x 300, Q = 1,060 CMH	1.9	nos.	2						
d.	RG-750 x 300, Q = 944 CMH	1.9	nos.	1						
e.	RG-800 x 300, Q = 1,160 CMH	1.9	nos.	1						
/09	Diffusers									
Adjustable air discharge										
a.	AD φ 250 mm, Q = 780 CMH	1.9	nos.	8						
b.	AD φ 250 mm, Q = 1,020 CMH	1.9	nos.	1						
c.	AD φ 250 mm, Q = 1,100 CMH	1.9	nos.	2						
d.	AD φ 250 mm, Q = 630 CMH	1.9	nos.	2						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
e.	AD ϕ 250 mm, Q = 580 CMH	I.9	nos.	4						
/10	Volume damper, 250 x 200	I.9	nos.	1						
/11	Volume damper, 200 x 150	I.9	nos.	1						
/12	Fire damper, 1,100 x 350	I.9	nos.	1						
/13	Fire damper, 500 x 350	I.9	nos.	1						
/14	Louvers 1,800 x 2,400, Q = 37,750 CMH	I.9	nos.	2						
/15	Louver 400 x 200, Q = 300 CMH	I.9	nos.	1						
/16	Louver 450 x 200, Q = 650 CMH	I.9	nos.	1						
/17	Ventilator zinc plated steel									
a.	guage 22	I.9	kg	2,979						
b.	guage 24 & over	I.9	kg	1455						
/18	Air conditioning zinc plated steel									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
a.	guage 22	1.9	kg	345						
b.	guage 24 & over	1.9	kg	506						
/19	Refrigerant pipe for air conditioning									
a.	D.19.05 mm	1.9	m	24						
b.	D.15.88 mm	1.9	m	24						
Subtotal of Item 2.6.3										
2.6.4 DIESEL GENERATOR HOUSE										
Earth Works										
/01	Open-cut excavation, in rock	C.5.5	m ³	50						
/02	Random backfill	C.7.6	m ³	19						
/03	Gravel bedding	C.7.6	m ³	2						
Concrete Works										
/04	Concrete, class C, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	structure	E.12	m ³	66						
/05	Concrete, class H, for plain concrete	E.12	m ³	5						
/06	Formwork, F1 finish, for concrete of Items /04 and /05	E.13.8	m ²	66						
/07	Formwork, F3 finish, for concrete of Item /04	E.13.8	m ²	240						
/08	Reinforcing bars for concrete works	E.14.3	ton	6						
Masonry Works										
/09	Hollow-concrete block to roof parapet, 100 mm thick including bonding cement mortar		m ²	13						
Bituminous Waterproof Roofing										
/10	3-ply built-up asphalt roofing on roof, including asphalt compound joint and required		m ²							

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	caulking	I.6.2	m ²	71						
Plastering Works										
/11	Cement mortar plaster on floor	I.6.2	m ²	22						
/12	Base cement mortar plaster, 20 mm thick for built-up roofing on roof	I.6.2	m ²	58						
/13	Cement mortar plaster to interior skirting, H= 100 mm	I.6.2	m	20						
/14	Cement mortar plaster to exterior skirting, H= 200 mm	I.6.2	m	24						
/15	Cement mortar plaster to interior wall	I.6.2	m ²	72						
/16	Waterproof cement mortar plaster to roof gutter including metal wire lath	I.6.2	m ²	5						
/17	Waterproof cement mortar									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	plaster to roof parapet including metal wire lath	1.6.2	m ²	24						
/18	Concrete trowel finish on floor	1.6.2	m ²	4						
	Spray Tile Finish									
/19	Spray tile on exposed concrete	1.6.2	m ²	350						
	Painting Works									
/20	Oil paint to metal surface	1.6.2	m ²	8						
	Steel Doors									
/21	Steel door leaves and frames including louvers, required hardware, accessories and caulking to outside perimeter	1.6.2	m ²	3.2						
	Aluminium Windows and Louvers									
/22	Aluminium windows louvers and frames including required hardware, accessories and									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	caulking to outside perimeter	I.6.2	m ²	6.4						
Glazing Works										
/23	Figured wire glass, t= 6.8 mm including glazing bead	I.6.2	m ²	27						
Miscellaneous Metal Works										
/24	Roof drain, cast iron made, D.100 mm	I.6.2	nos.	2						
/25	Steel hoist beam including base plate and anchor bolt	I.6.2	kg	340						
/26	Checkered steel plate, t= 4.5 mm including base angle, anchor bar and accessories	I.6.2	m ²	4						
Miscellaneous Works										
/27	Polyvinyl chloride downspout, D.100 mm including required accessories	I.6.2	m	11						
/28	Elastic joint filler, 20 mm thick including joint caulking	I.6.2	m ²	1.2						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Subtotal of Item 2.6.4										
Subtotal of Item 2.6										
2.7 ELECTRICAL WORKS										
2.7.1 PANEL										
/01	Lighting panel "A"	J.7	set	1						
/02	Lighting panel "B"	J.7	set	1						
/03	Lighting panel "C"	J.7	set	1						
Subtotal of Item 2.7.1										
2.7.2 LIGHTING FIXTURES										
/01	Type A-1 (FL 40 W x 2)	J.7	set	60						
/02	Type A-2 (FL 40 W x 1)	J.7	set	37						
/03	Type B-1 (FL 40 W x 2)	J.7	set	2						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Type B-2 (FL 40 W x 1)	J.7	set	53						
/05	Type C (FL 40 W x 1)	J.7	set	32						
/06	Type D-1 (FL 40 W x 2)	J.7	set	32						
/07	Type D-2 (FL 40 W x 1)	J.7	set	11						
/08	Type E (LL 60 W x 1)	J.7	set	10						
/09	Type F (LL 60 W x 1)	J.7	set	48						
/10	Type G (ML 400 W x 1)	J.7	set	36						
/11	Type H (ML 400 W x 1)	J.7	set	21						
Subtotal of Item 2.7.2										
2.7.3 OTHERS										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/01	Convenience outlet (20 A - 127 V)	J.7	set	50						
/02	Tumbler switch (10 A - 127 V)	J.7	set	60						
/03	Three way switch (10 A - 127 V)	J.7	set	25						
/04	Safety switch (3 P x 220/127 V x 50 A)	J.7	set	3						
Subtotal of Item 2.7.3										
2.7.4 PIPING										
/01	Conduit pipe, D.16 mm (ϕ 1/2 ")	J.7	m	2,900						
/02	Conduit pipe, D.22 mm (ϕ 3/4 ")	J.7	m	70						
Subtotal of Item 2.7.4										
2.7.5 WIRING AND CABLING										
/01	IV wire, 2.0 mm ² (TW 14 AWG)	J.7	m	4,600						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/02	IV wire, 3.5 mm ² (TW 12 AWG)	J.7	m	1,050						
/03	IV wire, 5.5 mm ² (TW 10 AWG)	J.7	m	870						
/04	CV cable, 2C x 5.5 mm ² (2 x 10 AWG)	J.7	m	450						
/05	CV cable, 4C x 3.5 mm ² (4 x 12 AWG)	J.7	m	24						
/06	CV cable, 4C x 5.5 mm ² (4 x 10 AWG)	J.7	m	70						
/07	CV cable, 4C x 22 mm ² (4 x 4 AWG)	J.7	m	85						
Subtotal of Item 2.7.5										
2.7.6 TELEPHONE FACILITIES										
/01	PABX sets	J.7	set	1						
/02	Battery and charger	J.7	set	1						
/03	Main distribution frame	J.7	set	1						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/04	Telephone set	J.7	set	30						
/05	Conduit pipe, D.16 mm	J.7	m	345						
/06	Conduit pipe, D.22 mm	J.7	m	60						
/07	Conduit pipe, D.28 mm	J.7	m	100						
/08	Telephone wire, indoor	J.7	m	800						
/09	Telephone wire, outdoor	J.7	m	600						
Subtotal of Item 2.7.6										
2.7.7 EARTHING SYSTEM										
Earthing conductor										
/01	HDCC 100 mm ² (4/0 AWG)	J.7	m	3,200						
/02	HDCC 38 mm ² (2 AWG)	J.7	m	600						
Plate, rod and fittings										
/03	Copper plate, 1.0 m x 1.0 m x 3 mm	J.7	nos.	12						
/04	Copper rod, D.19 mm x 2.4 m	J.7	nos.	15						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/05	Clamp for copper plate and rod	J.7	nos.	30						
Civil works										
/06	Open-up excavation, in common	C.5.5	m ³	570						
/07	Random backfill	C.7.6	m ³	570						
Subtotal of Item 2.7.7										
Subtotal of Item 2.7										
2.8	MISCELLANEOUS									
/01	Trash boom	L.1.2	m	155						
/02	Staff gauge, W = 200 mm and H = 25 m	L.2.2	L.S							
Subtotal of Item 2.8										
TOTAL OF ITEM 2										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
3.	SEVERINO PENSTOCK									
3.1	EARTH WORKS									
/01	Clearing the site for penstock	C.2.3	m ²	2,420						
/02	Open-cut excavation, in common, for penstock line	C.5.5	m ³	5,770						
/03	Open-cut excavation, in weathered rock, for penstock line	C.5.5	m ³	6,660						
/04	Open-cut excavation in rock, for penstock line	C.5.5	m ³	350						
/05	Trench excavation, in all classes, for side ditch and catch basin	C.6.2	m ³	154						
/06	Sod facing for cut slope protection	C.20.2	m ²	590						
	Subtotal of Item 3.1									
3.2	CONCRETE WORKS									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/01	Concrete, class E, for bottom slab and saddle block along penstock line	E.12	m ³	251						
/02	Concrete, class E, for anchor block	E.12	m ³	232						
/03	Concrete, class E, for foundation of surge tank and valves	E.12	m ³	235						
/04	Concrete, class E, encasing of penstock pipe	E.12	m ³	1,150						
/05	Concrete, class F, for side ditch and catch basin along penstock line	E.12	m ³	94						
/06	Concrete, class F, for cable duct along penstock line	E.12	m ³	18						
/07	Concrete, class H, for levelling concrete of bottom slab, foundation of surge tank and valves, side ditch, catch basin and cable duct along penstock line	E.12	m ³	45						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/08	Formwork, F1 finish, for concrete of Items /01 and /05	E.13.8	m ²	363						
/09	Formwork, F2 finish, for concrete of Items /01, /02, /03, /04 and /06	E.13.8	m ²	833						
/10	Formwork, F3 finish, for concrete of Items /05	E.13.8	m ²	264						
/11	Bituminous coating for contraction joint of bottom slab and encasing concrete along penstock pipe	E.25.2	m ²	196						
/12	Reinforcing bars for concrete works	E.14.3	ton	91						
/13	Dowel bar, D.22 mm (round bar) for bottom slab of penstock line	E.26.3	ton	0.2						
/14	Anchor bar, D.25 mm for encasing concrete	E.27.3	m	432						
/15	Shotcrete with wire mesh									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	for cut slope protection along penstock line, t= 100 mm	E.17.6	m ²	350						
/16	Shotcrete with wire mesh for cut slope protection along penstock line, t= 50 mm	E.17.6	m ²	1,160						
/17	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	48						
	Subtotal of Item 3.2									
3.3	MISCELLANEOUS METAL WORKS									
/01	Round bar for step ladder	H.9.2	kg	19						
	Subtotal of Item 3.3									
	TOTAL OF ITEM 3									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
4.	SEVERINO HEAD TANK									
4.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER									
/01	Care of water during construction in open air construction site	B.2.4	L.S.							
	Subtotal of Item 4.1									
4.2	EARTH WORKS									
/01	Clearing the site for head tank	C.2.3	m ²	2,410						
/02	Open-cut excavation, in common, for head tank	C.5.5	m ³	6,130						
/03	Open-cut excavation, in weathered rock, for head tank	C.5.5	m ³	9,260						
/04	Open-cut excavation, in rock, for head tank	C.5.5	m ³	1,030						
/05	Trench excavation, all classes, for underdrain, transverse drain,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	drainage pipe, drain ditch and foundation of fence	C.6.2	m ³	170						
/06	Free draining backfill	C.7.6	m ³	463						
/07	Backfilling for head tank	C.7.6	m ³	4,350						
/08	Embankment	C.7.6	m ³	780						
/09	Sand and gravel fill for underdrain and transverse drain	C.7.6	m ³	53						
/10	Sod facing	C.20.2	m ²	550						
/11	Stone pitching for embankment slope protection	C.7.6	m ²	556						
/12	Gravel bedding for drain ditch	C.7.6	m ³	4						
	Subtotal of Item 4.2									
4.3	CONCRETE WORKS									
/01	Concrete, class B, for head tank structure	E.12	m ³	2,100						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/02	Concrete, class E, for gravity walls	E.12	m ³	1,220						
/03	Concrete, class E, for encasing of penstock line	E.12	m ³	247						
/04	Concrete, class E, for stair	E.12	m ³	5						
/05	Concrete, class F, for drain ditch	E.12	m ³	11						
/06	Concrete, class G, for foundation concrete of wire net fence	E.12	m ³	1						
/07	Backfill concrete, class G, for underdrain and drainage pipes	E.12	m ³	87						
/08	Concrete, class H, for levelling concrete for bottom slab of head tank structure and drain ditch	E.12	m ³	89						
/09	Formwork, F1 finish, for concrete of Items /01, /02,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
	/03. /04. /05 and /06	E.13.8	m ²	1,700						
/10	Formwork, F2 finish, for concrete of Items /02 and /04	E.13.8	m ²	106						
/11	Formwork, F3 finish, for concrete of Items /01, /02 and /05	E.13.8	m ²	1,940						
/12	P.V.C. waterstop, type A (W= 300 mm)	E.22.4	m	228						
/13	Bituminous coating for contraction joint	E.25.2	m ²	85						
/14	Joint filler, for expansion joint (t= 20 mm)	E.24.3	m ³	207						
/15	Reinforcing bars for concrete works	E.14.3	ton	156						
/16	Anchor bar, D.25 mm	E.27.3	m	240						
Subtotal of Item 4.3										
4.4	DRAINAGE									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/01	Perforated concrete pipe, D.150 mm for underdrain	F.2.2	m	150						
/02	Concrete pipe, D. 300 mm for underdrain	F.2.2	m	35						
Subtotal of Item 4.4										
4.5 ROAD WORKS										
/01	Graded crushed stone subbase	G.9.5	m ³	109						
Subtotal of Item 4.5										
4.6 MISCELLANEOUS METAL WORKS										
/01	Steel pipe with valve, D. 100 mm for drainage of head tank	H.11.2	kg	745						
/02	Steel handrail	H.7.2	kg	2,080						
/03	Round bar for step ladder	H.9.2	kg	376						
/04	Wire net fence with gate	H.12.2	kg	312						
/05	Staff gauge, 2 nos.,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
	W = 200 mm and H = 11.8 m	L.2.2	L.S.							
/06	Steel pipe for water level gauge	L.2.2	kg	2,540						
Subtotal of Item 4.6										
TOTAL OF ITEM 4										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
5. SEVERINO SUBSTATION										
5.1 EARTH WORKS										
/01	Clearing the site for switchgear yard	C.2.3	m ²	2,600						
/02	Open-cut excavation, in common, for switchgear yard	C.5.5	m ³	6,750						
/03	Open-cut excavation, in weathered rock, for switchgear yard	C.5.5	m ³	2,040						
/04	Open-cut excavation, in common, for cable culvert	C.5.5	m ³	380						
/05	Trench excavation, all classes, for foundation of equipment	C.6.2	m ³	1,260						
/06	Trench excavation, all classes, for cable duct, drain ditch, catch basin and foundation of wire net fence	C.6.2	m ³	470						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Backfilling for earth work of items /04, /05 and /06	C.7.6	m ³	1,170						
/08	Gravel bedding for cable culvert, foundation of equipment, cable duct, drain ditch and catch basin	C.7.6	m ³	116						
/09	Gravel surfacing	C.7.6	m ³	222						
/10	Sod facing for cut slope protection	C.20.2	m ²	500						
Subtotal of Item 5.1										
5.2	CONCRETE WORKS									
/01	Concrete, class E, for foundation of equipment	E.12	m ³	342						
/02	Concrete, class E, for cable culvert	E.12	m ³	86						
/03	Concrete, class F, for cable duct, drain ditch and catch basin	E.12	m ³	162						
/04	Concrete, class G, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	foundation of wire net fence	E.12	m ³	8						
/05	Concrete, class H, for levelling concrete of foundation of equipment, cable culvert, cable duct, drain ditch, and catch basin	E.12	m ³	60						
/06	Formwork, F1 finish, for concrete of Item /01	E.13.8	m ²	739						
/07	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	183						
/08	Formwork, F1 finish, for concrete of Items /03 and /04	E.13.8	m ²	874						
/09	Formwork, F2 finish, for concrete of Item /02	E.13.8	m ²	147						
/10	Formwork, F2 finish, for concrete of Item /03	E.13.8	m ²	279						
/11	Formwork, F3 finish, for concrete of Item /03	E.13.8	m ²	224						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/12	Bituminous coating for contraction joint of cable culvert	E.25.2	m ²	3						
/13	Reinforcing bars for concrete works	E.14.3	ton	26.4						
/14	P.V.C. waterstop, type B (W = 200 mm)	E.22.4	m	9						
/15	Dowel bar, D.22 mm (round bar) for cable culvert	E.26.3	ton	0.1						
Subtotal of Item 5.2										
5.3	ROAD WORKS									
/01	Graded crushed stone subbase	G.9.5	m ³	15						
Subtotal of Item 5.3										
5.4	MISCELLANEOUS METAL WORKS									
/01	Embedded metal	H.13.2	kg	2,580						
/02	Wire net fence with gate	H.12.2	kg	4,500						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
703	Round bar for step ladder	H.9.2	kg	38						
704	Checkered plate for cable duct	H.10.2	kg	3,780						
Subtotal of Item 5.4										
TOTAL OF ITEM 5										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
6.	SEVERINO OPEN CHANNEL									
6.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER									
/01	Construction and removal of temporary coffering	B.1.4	L.S.							
/02	Care of water during construction in open air construction site	B.2.4	L.S.							
Subtotal of Item 6.1										
6.2	EARTH WORKS									
/01	Clearing the site along open channel	C.2.3	m ²	177,400						
/02	Open-cut excavation, in common, for open channel	C.5.5	m ³	211,900						
/03	Open-cut excavation, in common, for structures	C.5.5	m ³	22,300						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Open-cut excavation, in weathered rock, for open channel (to spoil area, except embankment material)	C.5.5	m ³	28,300						
/05	Open-cut excavation, in weathered rock, for structures	C.5.5	m ³	23,600						
/06	Open-cut excavation, in rock, for open channel	C.5.5	m ³	6,780						
/07	Open-cut excavation, in rock, for structures	C.5.5	m ³	730						
/08	Trench excavation, all classes, for underdrain	C.6.2	m ³	570						
/09	Trench excavation, all classes, for drain ditch, catch basin and foundation of wire net fence	C.6.2	m ³	5,780						
/10	Embankment for open channel (excavated weathered rock to embankment portion)	C.8.7	m ³	209,900						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/11	Backfilling for structures	C.7.6	m ³	9,790						
/12	Sand and gravel bedding for open channel lining	C.7.6	m ³	1,960						
/13	Gravel bedding for structures	C.7.6	m ³	766						
/14	Gabion mattress (t= 500 mm)	C.18.2	m ³	7,190						
/15	Sod facing	C.20.2	m ²	76,200						
Subtotal of Item 6.2										
6.3	CONCRETE WORKS									
/01	Concrete, class A, for pedestrian bridge slab and girders	E.12	m ³	68						
/02	Concrete, class A, for blockout	E.12	m ³	8						
/03	Concrete, class B, for syphon structure	E.12	m ³	6,130						
/04	Concrete, class B, for valve box of syphon	E.12	m ³	38						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/05	Concrete, class E, for open and closed transition structure	E.12	m ³	860						
/06	Concrete, class E, for drainage culvert and wing walls	E.12	m ³	1,460						
/07	Concrete, class E, for pedestrian bridge abutment walls	E.12	m ³	70						
/08	Concrete, class F, for lining concrete of open channel	E.12	m ³	9,390						
/09	Concrete, class F, for drain ditch and catch basin	E.12	m ³	1,870						
/10	Concrete, class G, for foundation of wire net fence	E.12	m ³	14						
/11	Concrete, class H, for levelling concrete	E.12	m ³	627						
/12	Formwork, F1 finish, for concrete of items /03, /04 /05, /06 and /07	E.13.8	m ²	10,890						
/13	Formwork, F1 finish, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	concrete of Item /08	E.13.8	m ²	1,650						
/14	Formwork, F1 finish, for concrete of Items /09 and /10	E.13.8	m ²	9,540						
/15	Formwork, F2 finish, for concrete of Items /01, /04 and /07	E.13.8	m ²	1,050						
/16	Formwork, F3 finish, for concrete of Items /02, /03, /05 and /06	E.13.8	m ²	11,020						
/17	Formwork, F3 finish, for concrete of Item /08	E.13.8	m ²	48,240						
/18	Formwork, F3 finish, for concrete of Item /09	E.13.8	m ²	6,300						
/19	Reinforcing bars for open channel lining	E.14.3	ton	155						
/20	Reinforcing bars for structures	E.14.3	ton	222						
/21	Dowel bars, D.16 mm (round bar) for open channel	E.26.3	ton	2.5						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/22	Dowel bars, D.22 mm (round bar) for structures	E.26.3	ton	6.4						
/23	P.V.C. waterstop, type B (W = 200 mm) for structures	E.22.4	m	1,540						
/24	P.V.C. waterstop, type C (W = 150 mm) for open channel	E.22.4	m	10,530						
/25	Bituminous coating for contraction joints of open channel and structures	E.25.2	m ²	2,350						
/26	Joint filler for pedestrian bridge (t= 20 mm)	E.24.3	m ²	5,890						
/27	Joint filler for culvert and wall (t= 10 mm)	E.24.3	m ²	85						
/28	Shotcrete with wire mesh for cut slope protection, t= 100 mm	E.17.6	m ²	2,870						
/29	P.V.C. pipe, D. 50 mm for weephole	E.4.3	m	1,440						
Subtotal of Item 6.3										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
6.4	DRAINAGE									
/01	P.V.C. perforated pipes, D.100 mm for underdrain	F.4.2	m	5,780						
/02	Pre-cast concrete pipe, D.800 mm	F.2.2	m	282						
/03	Pre-cast concrete pipe, D.1,000 mm	F.2.2	m	351						
Subtotal of Item 6.4										
6.5	ROAD WORKS									
/01	Compacting of original ground	G.7.4	m ²	17,390						
/02	Improved subgrade material, not less than corrected CBR 12	G.8.4	m ³	1,080						
/03	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	3,420						
Subtotal of Item 6.5										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
6.6	MISCELLANEOUS METAL WORKS									
/01	Steel drain pipe, D.200 mm with valve	H.11.2	kg	5,370						
/02	Steel trash rack	H.14.2	kg	8,680						
/03	Steel handrail for pedestrian bridge and open transition structure	H.7.2	kg	8,310						
/04	Wire net fence with gate	H.12.2	kg	9,870						
/05	Elastomeric bearing pad for pedestrian bridge, 300 x 200 x 24 mm	E.23.3	nos.	44						
/06	Anchor rods with steel pies, D.32 mm for pedestrian bridge	G.14.2	kg	315						
	Subtotal of Item 6.6									
	TOTAL OF ITEM 6									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
7.	LA ESPERANZA-POZA HONDA DIVERSION TUNNEL									
7.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER									
/01	Construction and removal of temporary coffering	B.1.4	L.S.							
/02	Care of water during construction in open air construction site	B.2.4	L.S.							
Subtotal of Item 7.1										
7.2	EARTH WORKS									
/01	Clearing the site for the inlet and outlet structures	C.2.3	m ²	4,870						
/02	Open-cut excavation, in common, for inlet and outlet structures	C.5.5	m ³	11,800						
/03	Open-cut excavation, in									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	weathered rock, for inlet and outlet structures	C.5.5	m ³	12,500						
	Open-cut excavation, in rock, for inlet and outlet structures	C.5.5	m ³	660						
/05	Underground excavation, all class, in tunnel	C.13.8	m ³	198,360						
/06	Trench excavation, all class, for drain ditch and catch basin	C.6.2	m ³	100						
/07	Permanent steel supports, H-125 x 125 mm	C.14.3	ton	117						
/08	D.25 mm rock bolts in tunnel	C.15.4	m	161,740						
/09	Backfilling for inlet and outlet structures	C.7.6	m ³	6,300						
/10	Gabion mattress, t= 500 mm	C.18.2	m ²	422						
/11	Sod facing	C.7.6	m ²	439						
Subtotal of Item 7.2										
7.3	DRILLING AND									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
GROUTING WORKS										
/01	D.45 mm drain holes in tunnel	D.8.3	m	8,680						
/02	Backfill grouting in tunnel	D.8.1	m ³	1,540						
/03	D.50 mm steel pipes for backfill grouting in tunnel	D.8.2	kg	4,850						
Subtotal of Item 7.3										
7.4 CONCRETE WORKS										
/01	Concrete, class B, for inlet culvert	E.12	m ³	669						
/02	Concrete, class D, for tunnel lining	E.12	m ³	65,880						
/03	Concrete, class E, for concrete facing walls of inlet and outlet structures	E.12	m ³	136						
/04	Concrete, class F, for drain ditch and catch basin	E.12	m ³	15						
/05	Concrete, class H, for leveling									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	concrete of inlet culvert, drain ditch and catch basin	E.12	m ³	39						
/06	Formwork, F1 finish, for concrete of Items /01 and /03	E.13.8	m ²	809						
/07	Formwork, F1 finish, for concrete of Item /04	E.13.8	m ²	29						
/08	Formwork, F3 finish, for concrete of Item /03	E.13.8	m ²	370						
/09	Formwork, F3 finish, for concrete of Item /01	E.13.8	m ²	841						
/10	Formwork, F3 finish, for concrete of Item /04	E.13.8	m ²	73						
/11	Formwork, F4 finish, for concrete of Item /02	E.13.8	m ²	96,670						
/12	Reinforcing bars for concrete works	E.14.3	ton	58						
/13	Shotcrete in tunnel	E.17.6	m ³	16,480						
/14	Steel wire mesh for Item /13	E.17.6	m ²	129,620						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/15	Shotcrete with wire mesh, for cut slope protection around inlet and outlet structures, t= 100 mm	E.17.6	m ²	700						
/16	Shotcrete with wire mesh, for cut slope protection around inlet and outlet structures, t= 50 mm	E.17.6	m ²	341						
/17	P.V.C. waterstop, type B (W = 200 mm)	E.22.4	m	141						
/18	Anchor bars, D.25 mm for concrete facing wall	E.27.3	m	150						
/19	Dowel bars, D.22 mm (round bar) for inlet culvert	E.26.3	ton	0.9						
/20	Bituminous coating for contraction joint	E.25.2	m ²	95						
/21	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	89						
Subtotal of Item 7.4										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
7.5	CONVERGENCE MEASUREMENTS									
/01	Measurement of horizontal convergence	K.7	nos.	6,400						
/02	Measurement of diagonal convergence	K.7	nos.	6,400						
/03	Measurement of roof settlement	K.7	nos.	6,400						
/04	Measurement of invert upheaval	K.7	nos.	6,400						
/05	Stress measurement of rock bolts	K.7	nos.	1,350						
/06	Stress measurement of shotcrete	K.7	nos.	1,350						
/07	Stress measurement of steel supports	K.7	nos.	40						
	Subtotal of Item 7.5									
	TOTAL OF ITEM 7									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8.	POZA HONDA-MANCHEA GRANDE DIVERSION TUNNEL									
8.1	CARE OF RIVER AND CONTROL AND REMOVAL OF WATER									
/01	Construction and removal of temporary coffering	B.1.4	L.S.							
/02	Care of water during construction in open air construction site	B.2.4	L.S.							
Subtotal of Item 8.1										
8.2	EARTH WORKS									
/01	Clearing the site for the inlet and outlet structures	C.2.3	m ²	12,900						
/02	Open-cut excavation, in common, for inlet and outlet structures, outlet channel and anchor block of trash boom	C.5.5	m ³	58,000						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Open-cut excavation, in weathered rock, for inlet and outlet structures, outlet channel and anchor block of trash boom	C.5.5	m ³	51,700						
/04	Open-cut excavation, in rock, for inlet and outlet structures, outlet channel and anchor block of trash boom	C.5.5	m ³	900						
/05	Underground excavation, all classes, in tunnel and inlet structure	C.13.6	m ³	51,190						
/06	Trench excavation, all classes, for drain ditch, catch basin and foundation of wire net fence	C.6.2	m ³	290						
/07	Permanent steel supports, H-125 x 125 mm	C.14.3	ton	26						
/08	Permanent steel supports, H-250 x 250 mm	C.14.3	ton	57						
/09	D.25 mm rock bolts	C.15.4	m	38,510						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/10	Backfilling for inlet and outlet structures and anchor block of trash boom	C.7.6	m ³	670						
/11	Gravel surfacing for inlet structure	C.7.6	m ²	132						
/12	Gravel bedding for drain ditch and catch basin	C.7.6	m ²	17						
/13	Sod facing for inlet and outlet structures	C.20.2	m ²	5,920						
Subtotal of Item 8.2										
8.3	DRILLING AND GROUTING WORKS									
/01	D.45 mm drain holes in tunnel	D.8.3	m	3,110						
/02	Backfill grouting for tunnel, inlet structure and concrete plug	D.8.1	m ³	432						
/03	Contact grouting for concrete plug	D.8.1	kg	112						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/04	D.50 mm steel pipes for backfill grouting in tunnel and inlet structure	D.8.2	kg	1,800						
/05	D.40 mm steel pipes for contact grouting	D.8.1	kg	160						
/06	D.25 mm steel pipes for contact grouting	D.8.1	kg	33						
Subtotal of Item 8.3										
8.4	CONCRETE WORKS									
/01	Concrete, class A, for blockout concrete of inlet structure	E.12	m³	14						
/02	Concrete, class C, for floor slab, beam and stair of inlet structure	E.12	m³	206						
/03	Concrete, class D, for inlet structure	E.12	m³	2,340						
/04	Concrete, class D, for tunnel lining	E.12	m³	17,220						
/05	Concrete, class E, for concrete facing walls of									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
	inlet and outlet structures	E.12	m ³	487						
/06	Concrete, class F, for drain ditch and catch basin	E.12	m ³	93						
/07	Concrete, class G, for plug and secondary concrete in inlet structure	E.12	m ³	360						
/08	Concrete, class G, for anchor block of trash boom and foundation concrete of wire net fence	E.12	m ³	201						
/09	Concrete, class H, for leveling concrete of drain ditch and catch basin	E.12	m ³	17						
/10	Formwork, F1 finish, for concrete of Items /03, /04, /05 and /07	E.13.8	m ²	587						
/11	Formwork, F1 finish, for concrete of Item /06	E.13.8	m ²	630						
/12	Formwork, F1 finish, for concrete of Item /08	E.13.8	m ²	163						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/13	Formwork, F2 finish, for concrete of Items /02, /03, /05 and /07	E.13.8	m ²	2,100						
/14	Formwork, F3 finish, for concrete of Items /01, /03, /05 and /07	E.13.8	m ²	1,470						
/15	Formwork, F3 finish, for concrete of Item /06	E.13.8	m ²	498						
/16	Formwork, F4 finish, for concrete of Item /04	E.13.8	m ²	24,770						
/17	Formwork, F4 finish, for concrete of Item /03	E.13.8	m ²	249						
/18	Reinforcing bars for concrete works	E.14.3	ton	192						
/19	Shotcrete in tunnel and inlet structure	E.17.6	m ³	5,400						
/20	Steel wire mesh for Item /19	E.17.6	m ²	37,860						
/21	Shotcrete with wire mesh for cut slope protection, t= 100 mm	E.17.6	m ²	5,470						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/22	Shotcrete with wire mesh for cut slope protection, r= 50 mm	E.17.6	m ²	148						
/23	Anchor bars, D.25 mm for concrete facing wall	E.27.3	m	432						
/24	P.V.C. waterstop, type B (W= 200 mm)	E.22.2	m	73						
/25	Bituminous coating for contraction joint	E.25.3	m ²	98						
/26	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	376						
Subtotal of Item 8.4										
8.5	MISCELLANEOUS METAL WORKS									
/01	Embedded metal	H.13.2	kg	306						
/02	Steel pipe handrail in inlet structure	H.7.2	kg	1,874						
/03	Steel ladder with safety cage in inlet structure	H.8.2	kg	74						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Steel step (round bar) in inlet structure	H.9.2	kg	229						
/05	Steel pipes for water level gauge in inlet structure	H.11.2	kg	561						
/06	Grating and hatch cover in inlet structure	H.10.2	kg	3,809						
/07	Wire net fence with gate	H.12.2	kg	100						
Subtotal of Item 8.5										
8.6	CONVERGENCE MEASUREMENTS									
/01	Measurement of horizontal convergence	K.7	nos.	2,100						
/02	Measurement of diagonal convergence	K.7	nos.	2,100						
/03	Measurement of roof settlement	K.7	nos.	2,100						
/04	Measurement of									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	invert upheaval	K.7	nos.	2,100						
/05	Stress measurement of rock bolts	K.7	nos.	450						
/06	Stress measurement of shotcrete	K.7	nos.	450						
/07	Stress measurement of steel supports	K.7	nos.	40						
Subtotal of Item 8.6										
8.7 BUILDING WORKS OF POZA HONDA INLET SUPERSTRUCTURE										
Concrete Works										
/01	Concrete, class C, for structure	E.12	m ³	57						
/02	Concrete, class H, for levelling concrete	E.12	m ³	5						
/03	Formwork, F1 finish, for concrete of Item /01	E.13.8	m ²	134						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Formwork, F3 finish, for concrete of Item /01	E.13.8	m ²	215						
/05	Reinforcing bars for concrete works	E.14.3	ton	4.3						
Masonry Works										
/06	Hollow concrete block, masonry to roof parapet, 100 mm thick including bonding cement mortar	1.6.2	m ²	6						
Bituminous Waterproof Roofing										
/07	3-ply built-up asphalt roofing on roof, including asphalt compound joint and required caulking	1.6.2	m ²	72						
Plastering Works										
/08	Cement mortar plaster on floor	1.6.2	m ²	33						
/09	Base cement mortar plaster,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	20 mm thick for built-up roofing	I.6.2	m ²	59						
/10	Cement mortar plaster to interior skirting, H= 100 mm	I.6.2	m	31						
/11	Cement mortar plaster to exterior skirting, H= 200 mm	I.6.2	m	25						
/12	Cement mortar plaster to interior wall	I.6.2	m ²	106						
/13	Waterproof cement mortar plaster to roof gutter including metal wire lath	I.6.2	m ²	8						
/14	Waterproof cement mortar plaster to roof parapet including metal wire lath	I.6.2	m ²	12						
/15	Cement mortar border to handrail	I.6.2	m	5						
Spray Tile Finish										
/16	Spray tile on exposed concrete	I.6.2	m ²	167						
Painting Works										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/17	Oil paint to metal surface	I.6.2	m ²	46						
Steel Doors										
/18	Steel door leaves and frames including louvers, required hardware, accessories and caulking to outside perimeter	I.6.2	m ²	15						
Aluminium Windows and Louvers										
/19	Aluminium windows and frames including required hardware, accessories and caulking	I.6.2	m ²	4						
/20	Aluminium louvers and frames including required hardware, accessories and caulking	I.6.2	m ²	2						
Miscellaneous										
/21	Clear wire glass t= 6.8 mm	I.6.2	m ²	5						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
Ventilation Wok										
/22	Multiblade fan, 15,480 CMH x 27 mm sq. 2.3 kW, 220 V, 3 φ, 60 Hz	1.9	nos.	1						
/23	Intake lower W/inseciscreen 1200 x 1500 mm, Q=15,480 CMH	1.9	nos.	1						
/24	Ventilating Registers									
a.	UR-VHS, 400 x 200 Q= 1180 CMH	1.9	nos.	12						
b.	UR-VHS, 200 x 150, Q= 240 CMH	1.9	nos.	4						
c.	UR-VHS, 200 x 150, Q= 180 CMH	1.9	nos.	2						
/25	Ventilation zinc plated steel									
a.	gauge 22	1.9	kg	394						
b.	gauge 24	1.9	kg	604						
Subtotal of Item 8.7										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
8.8 ELECTRICAL WORKS										
Panel										
/01	Lighting panel	J.7	set	1						
Lighting Fixture										
/02	Type - A (FL 40 W x 2)	J.7	set	7						
/03	Type - B-1 (FL 40 W x 2)	J.7	set	6						
/04	Type - B-2 (FL 40 W x 1)	J.7	set	24						
/05	Type - F (FL 60 W x 1)	J.7	set	2						
Others										
/06	Convenience outlet (20 A - 127 V)	J.7	set	7						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Tumbler switch (10 A - 127 V)	J.7	set	7						
/08	Three way switch (10 A - 127 V)	J.7	set	6						
Piping										
/09	Conduit pipe, D.16 mm (φ 1/2")	J.7	m	470						
/10	Conduit pipe, D.22 mm (φ 3/4")	J.7	m	70						
Wiring and Cabling										
/11	IV wire, 2.0 mm ² (TW 14 AWG)	J.7	m	960						
/12	IV wire, 3.5 mm ² (TW 12 AWG)	J.7	m	220						
/13	CV cable, 4C x 3.5 mm ² (4 X 12 AWG)	J.7	m	60						
Earthing System										
/14	Copper conductor, 50 mm ²									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(1 10 AWG)	J.7	m	500						
/15	Copper conductor, 38 mm ² (2 AWG)	J.7	nos.	50						
	Subtotal of Item 8.8									
8.9	MISCELLANEOUS									
/01	Trash boom	L.1.2	m	125						
/02	Staff gauge, D.100 mm steel pipe, H = 22 m	L.2.2	L.S.							
	Subtotal of Item 8.9									
	TOTAL OF ITEM 8									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
9.	LA SECA WORK ADIT									
9.1	EARTH WORKS									
/01	Clearing the site for adit portal	C.2.3	m ²	1,380						
/02	Open-cut excavation, in common, for adit portal	C.5.5	m ³	2,520						
/03	Open-cut excavation, in weathered rock, for adit portal	C.5.5	m ³	2,320						
/04	Open-cut excavation, in rock, for adit portal	C.5.5	m ³	122						
/05	Underground excavation, all classes, in adit	C.13.6	m ³	9,590						
/06	Trench excavation, all classes, for drain ditch and catch basin	C.6.2	m ³	33						
/07	Permanent steel support, H-125 x 125 mm	C.14.3	ton	51						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/08	D 25 mm rock bolts in adit tunnel	C.15.4	m	7,530						
/09	Backfilling for adit portal	C7.6	m ³	134						
/10	Backfilling for drain ditch and catch basin	C.7.6	m ³	13						
/11	Gravel surfacing	C.7.6	m ²	84						
/12	Gravel bedding for drain ditch and catch basin	C.7.6	m ²	2						
/13	Wet rubble masonry	C.19.2	m ²	10						
/14	Sod facing	C.20.2	m ²	340						
Subtotal of Item 9.1										
9.2	CONCRETE WORKS									
/01	Concrete, class D, for lining concrete of adit tunnel	E.12	m ³	619						
/02	Concrete, class E, for concrete facing walls									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	and portal structure	E.12	m ³	46						
/03	Concrete, class F, for drain ditch and catch basin	E.12	m ³	10						
/04	Concrete, class H, for levelling concrete of drain ditch and catch basin	E.12	m ³	2						
/05	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	9						
/06	Formwork, F1 finish, for concrete of Item /03	E.13.8	m ²	69						
/07	Formwork, F2 finish, for concrete of Item /02	E.13.8	m ²	152						
/08	Formwork, F3 finish, for concrete of Item /03	E.13.8	m ²	45						
/09	Formwork, F4 finish, for concrete of Item /01	E.13.8	m ²	908						
/10	Reinforcing bars for concrete works	E.14.3	ton	2						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/11	Shotcrete in adit tunnel	E.17.6	m ³	651						
/12	Steel wire mesh for Item /11	E.17.6	m ²	5,910						
/13	Anchor bars, D.25 mm for concrete facing wall	E.27.3	m	45						
/14	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	31						
Subtotal of Item 9.2										
TOTAL OF ITEM 9										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
10. LOS CUYUYES										
WORK ADIT										
10.1 EARTH WORKS										
/01	Clearing the site for adit portal	C.2.3	m ²	1,050						
/02	Open-cut excavation, in common, for adit portal	C.5.5	m ³	2,240						
/03	Open-cut excavation, in weathered rock, for adit portal	C.5.5	m ³	2,750						
/04	Open-cut excavation, in rock, for adit portal	C.5.5	m ³	150						
/05	Underground excavation, all classes, in adit	C.13.6	m ³	2,680						
/06	Trench excavation, all classes, for drain ditch and catch basing	C.6.2	m ³	45						
/07	Permanent steel supports, H-125 x 125 mm	C.14.3	ton	11						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/08	D.25 mm rock bolts in adit tunnel	C.15.4	m	1,870						
/09	Backfilling for adit portal	C.7.6	m ³	134						
/10	Backfilling for drain ditch and catch basin	C.7.6	m ³	18						
/11	Gravel surfacing	C.7.6	m ³	49						
/12	Gravel bedding for drain ditch and catch basin	C.7.6	m ³	3						
/13	Wet rubble masonry	C.19.2	m ³	10						
/14	Sod facing	C.20.2	m ²	350						
Subtotal of Item 10.1										
10.2 CONCRETE WORKS										
/01	Concrete, class D, for lining concrete of adit tunnel	E.12	m ³	603						
/02	Concrete, class E, for concrete facing walls and portal structure	E.12	m ³	28						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Concrete, class F, for drain ditch and catch basin	E.12	m ³	11						
/04	Concrete, class H, for levelling concrete of drain ditch and catch basin	E.12	m ³	2						
/05	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	3						
/06	Formwork, F1 finish, for concrete of Item /03	E.13.8	m ²	88						
/07	Formwork, F2 finish, for concrete of Item /02	E.13.8	m ²	97						
/08	Formwork, F3 finish, for concrete of Item /03	E.13.8	m ²	51						
/09	Formwork, F4 finish, for concrete of Item /01	E.13.8	m ²	879						
/10	Reinforcing bars for concrete works	E.14.3	ton	1						
/11	Shotcrete in adit tunnel	E.17.6	m ³	168						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
/12	Steel wire mesh for Item /11	E.17.6	m ²	1,560						
/13	Anchor bars, D.25 mm for concrete facing wall	E.27.3	m	33						
/14	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	27						
Subtotal of Item 10.2										
TOTAL OF ITEM 10										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
11.	POZA HONDA WORK ADIT									
11.1	EARTH WORKS									
/01	Clearing the site for adit portal	C.2.3	m ²	1,570						
/02	Open-cut excavation, in common, for adit portal	C.5.5	m ³	3,690						
/03	Open-cut excavation, in weathered rock, for adit portal	C.5.5	m ³	2,010						
/04	Open-cut excavation, in rock, for adit portal	C.5.5	m ³	106						
/05	Underground excavation, all classes, in adit	C.13.6	m ³	3,340						
/06	Trench excavation, all classes, for drain ditch and catch basing	C.6.2	m ³	36						
/07	Permanent steel supports, H-125 x 125 mm	C.14.3	ton	10						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
/08	D.25 mm rock bolts in adit tunnel	C.15.4	m	2,430						
/09	Backfilling for adit portal	C.7.6	m ³	134						
/10	Backfilling for drain ditch and catch basin	C.7.6	m ³	14						
/11	Gravel surfacing	C.7.6	m ²	75						
/12	Gravel bedding for drain ditch and catch basin	C.7.6	m ²	2						
/13	Wet rubble masonry	C.19.2	m ²	10						
/14	Sod facing	C.20.2	m ²	520						
Subtotal of Item 11.1										
11.2 CONCRETE WORKS										
/01	Concrete, class D, for lining concrete of adit tunnel	E.12	m ³	610						
/02	Concrete, class E, for concrete facing walls and portal structure	E.12	m ³	48						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Concrete, class F, for drain ditch and catch basin	E.12	m ³	10						
/04	Concrete, class H, for levelling concrete of drain ditch and catch basin	E.12	m ³	2						
/05	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	2						
/06	Formwork, F1 finish, for concrete of Item /03	E.13.8	m ²	74						
/07	Formwork, F2 finish, for concrete of Item /02	E.13.8	m ²	161						
/08	Formwork, F3 finish, for concrete of Item /03	E.13.8	m ²	48						
/09	Formwork, F4 finish, for concrete of Item /01	E.13.8	m ²	890						
/10	Reinforcing bars for concrete works	E.14.3	ton	2						
/11	Shotcrete in adit tunnel	E.17.6	m ³	209						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
/12	Steel wire mesh for Item /11	E.17.6	m ²	1,980						
/13	Anchor bars, D.25 mm for concrete facing wall	E.27.3	m	54						
/14	P.V.C. pipe, D.50 mm for weephole	F.4.3	m	38						
/15	Shotcrete with wire mesh for cut slope protection, t= 100 mm	E.17.6	m ²	96						
Subtotal of Item 11.2										
TOTAL OF ITEM 11										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
12. SEVERINO ACCESS ROAD										
12.1 EARTH WORKS										
/01	Clearing the site along access road	C.2.3	m ²	169,200						
/02	Open-cut excavation, in common including weathered rock	C.5.5	m ³	6,800						
/03	Open-cut excavation, in rock	C.5.5	m ³	100						
/04	Embankment (excavated material to embankment portion, including transportation up to 500 m)	C.7.4	m ³	156,000						
/05	Embankment (excavated material to embankment portion, including transportation more than 500 m)	C.7.4	m ³	142,300						
/06	Compaction of original ground	C.7.4	m ²	3,290						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Sod facing	C.20.2	m ²	57,800						
/08	Gabion for slope protection	C.18.2	m ³	- Nil -						
Subtotal of Item 12.1										
12.2 EXCAVATION AND FILLING FOR STRUCTURES										
Bridge										
/01	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/02	Backfill with selected material	C.7.6	m ³	- Nil -						
/03	Free draining backfill	C.7.6	m ³	- Nil -						
/04	Gravel bedding	C.7.6	m ³	- Nil -						
Box Culverts										
/07	Open-cut excavation, all classes	G.6.2	m ³	244						
/06	Backfill with selected material	C.7.6	m ³	117						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Free draining backfill	C.7.6	m ³	187						
/08	Gravel bedding Retaining Wall	C.7.6	m ³	13						
/09	Open-cut excavation, all class	G.6.2	m ³	1,360						
/10	Backfill with selected material	C.7.6	m ³	220						
/11	Free draining backfill	C.7.6	m ³	221						
/12	Gravel bedding	C.7.6	m ³	93						
Subtotal of Item 12.2										
12.3	CULVERT AND DRAINAGE WORKS									
/01	Open-cut excavation, all classes	G.6.2	m ³	3,210						
/02	Backfill with selected material	C.7.6	m ³	1,660						
/03	Crushed stone bedding	C.7.6	m ³	152						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Reinforced concrete pipe, D.600 mm	F.2.2	m	783						
/05	Reinforced concrete pipe, D. 800 mm	F.2.2	m	49						
/06	Reinforced concrete pipe, D.1,000 mm	F.2.2	m	- Nil -						
/07	P.V.C. perforated drain pipe, D.200 mm	F.4.2	m	4,010						
/08	Free drainage material for subdrain	C.7.6	m ³	837						
/09	Concrete, class E, for pipe culvert and wing walls	E.12	m ³	388						
/10	Concrete, class F, for side ditch and catch basin	E.12	m ³	1,340						
/11	Concrete, class H, for levelling concrete	E.12	m ³	30						
/12	Formwork, F1 finish, for concrete of Items /09, /10 and / 11	E.13.8	m ²	1,840						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/13	Formwork, F3 finish, for concrete of Items /09 and /10	E.13.8	m ²	10,910						
/14	Reinforcing bars for concrete works	E.14.3	ton	32						
/15	Gabion mattress, t= 500 mm	C.18.2	m ³	237						
16	Joint filler, t= 10 mm	E.24.3	m ²	- Nil -						
/17	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
Subtotal of Item 12.3										
12.4 CONCRETE WORKS										
/01	Concrete, class A, for bridge slab and girders	E.12	m ³	- Nil -						
/02	Concrete, class E, for bridge abutments and piers	E.12	m ³	- Nil -						
/03	Concrete, class E, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	box culvert	E.12	m ³	305						
/04	Concrete, class H, for levelling concrete	E.12	m ³	25						
/05	Rubble concrete for retaining wall (concrete, class E and rubble/boulder)	E.12 & G.5.2	m ³	2,020						
/06	Formwork, F1 finish, for concrete of Items /02, /03, /04 and /05	E.13.S	m ²	1,900						
/07	Formwork, F2 finish, for concrete of Items /01, /02 and /05	E.13.S	m ²	435						
/08	Formwork, F3 finish, for concrete of Items /02 and /03	E.13.S	m ²	518						
/09	Reinforcing bars for concrete works	E.14.3	ton	23						
/10	Joint filler for culvert, t= 10 mm	E.24.3	m ²	16						
/11	Joint filler for expansion									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	joint of bridge, t= 20 mm	E.24.3	m ²	- Nil -						
/12	Bituminous coating for contraction joint	E.25.2	m ²	110						
	Subtotal of Item 12.4									
12.5	PAVEMENT									
/01	Improved subgrade material not less than corrected CBR 12	G.8.4	m ³	8,620						
/02	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	8,290						
/03	Transportation of improved subgrade material	G.8.4	m ³ .km	4,310						
	Subtotal of Item 12.5									
12.6	MISCELLANEOUS									
/01	Guardrail	G.12.2	m	- Nil -						
/02	Warning signs	G.13.2	nos.	36						
/03	Bearing, fixed type	G.14.2	nos.	- Nil -						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Bearing, movable type	G.14.2	nos.	- Nil -						
/05	Steel handrails for bridge deck	H.7.2	kg	- Nil -						
/06	P.V.C. drain pipes, D. 100 mm	F.4.3	m	- Nil -						
/07	P.V.C. pipe, D.75 mm for weephole	F.4.3	m	554						
/08	Dowel bars, D.22 mm	E.26.3	ton	0.4						
/09	Anchor rod with steel pipe, D.32 mm for bridge shoe	G.14.2	kg	- Nil -						
Subtotal of Item 12.6										
TOTAL OF ITEM 12										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
13.	CAÑA DULCE INLET ACCESS ROAD									
13.1	EARTH WORKS									
/01	Clearing the site along access road	C.2.3	m ²	40,100						
/02	Open-cut excavation, in common including weathered rock	C.5.5	m ³	10,300						
/03	Open-cut excavation, in rock	C.5.5	m ³	100						
/04	Embankment (excavated material to embankment portion, including transportation up to 500 m)	G.7.4	m ³	38,000						
/05	Embankment (excavated material to embankment portion, including transportation more than 500 m)	G.7.4	m ³	20,700						
/06	Compaction of original ground	G.7.4	m ²	670						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Sod facing	C.20.2	m ²	21,100						
/08	Gabion for slope protection	C.18.2	m ³	- Nil -						
Subtotal of Item 13.1										
13.2 EXCAVATION AND FILLING FOR STRUCTURES										
Bridge										
/01	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/02	Backfill with selected material	C.7.6	m ³	- Nil -						
/03	Free draining backfill	C.7.6	m ³	- Nil -						
/04	Gravel bedding	C.7.6	m ³	- Nil -						
Box Culverts										
/05	Open-cut excavation, all classes	G.6.2	m ³	433						
/06	Backfill with selected material	C.7.6	m ³	112						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Free draining backfill	C.7.6	m ³	179						
/08	Gravel bedding	C.7.6	m ³	13						
Retaining Wall										
/09	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/10	Backfill with selected material	C.7.6	m ³	- Nil -						
/11	Free draining backfill	C.7.6	m ³	- Nil -						
/12	Gravel bedding	C.7.6	m ³	- Nil -						
Subtotal of Item 13.2										
13.3 CULVERT AND DRAINAGE WORKS										
/01	Open-cut excavation, all classes	G.6.2	m ³	572						
/02	Backfill with selected material	C.7.6	m ³	220						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Crushed stone bedding	C.7.6	m ³	13						
/04	Reinforced concrete pipe, D.600 mm	F.2.2	m	64						
/05	Reinforced concrete pipe, D. 800 mm	F.2.2	m	16						
/06	Reinforced concrete pipe, D.1,000 mm	F.2.2	m	- Nil -						
/07	P.V.C. perforated drain pipe, D.200 mm	F.4.2	m	1,200						
/08	Free drainage material for subdrain	C.7.6	m ³	251						
/09	Concrete, class E, for pipe culvert and wing walls	E.12	m ³	83						
/10	Concrete, class F, for side ditch and catch basin	E.12	m ³	346						
/11	Concrete, class H, for levelling concrete	E.12	m ³	10						
/12	Formwork, F1 finish, for concrete of Items /09, /10									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	and /11	E.13.8	m ²	256						
/13	Formwork, F3 finish, for concrete of Items /09 and /10	E.13.8	m ²	2,930						
/14	Reinforcing bars for concrete works	E.14.3	ton	6						
/15	Gabion mattress, t= 500 mm	C.18.2	m ³	181						
/16	Joint filler, t= 10 mm	E.24.3	m ²	- Nil -						
/17	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
	Subtotal of Item 13.3									
13.4	CONCRETE WORKS									
/01	Concrete, class A, for bridge slab and girders	E.12	m ³	- Nil -						
/02	Concrete, class E, for bridge abutments and piers	E.12	m ³	- Nil -						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Concrete, class E, for box culvert	E.12	m ³	260						
/04	Concrete, class H, for levelling concrete	E.12	m ³	25						
/05	Rubble concrete for retaining wall (concrete, class E and rubble/boulder)	E.12 & G.5.2	m ³	- Nil -						
/06	Formwork, F1 finish, for concrete of Items /02, /03, /04 and /05	E.13.8	m ²	483						
/07	Formwork, F2 finish, for concrete of Items /01, /02 and /05	E.13.8	m ²	- Nil -						
/08	Formwork, F3 finish, for concrete of Items /02 and /03	E.15.8	m ²	535						
/09	Reinforcing bars for concrete works	E.14.3	ton	22						
/10	Joint filler for culvert, t= 10 mm	E.24.3	m ²	16						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/11	Joint filler for expansion joint of bridge, t= 20 mm	E.24.3	m ²	- Nil -						
/12	Bituminous coating for contraction joint	E.25.2	m ²	17						
Subtotal of Item 13.4										
13.5 PAVEMENT										
/01	Improved subgrade material, not less than corrected CBR 12	G.8.4	m ³	1,610						
/02	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	1,610						
/03	Transportation of improved subgrade material	G.8.4	m ³ km	800						
Subtotal of Item 13.5										
13.6 MISCELLANEOUS										
/01	Guardrail	G.12.2	m	- Nil -						
/02	Warning signs	G.13.2	nos.	11						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Bearing, fixed type	G.14.2	nos.	- Nil -						
/04	Bearing, movable type	G.14.2	nos.	- Nil -						
/05	Steel handrails for bridge deck	H.7.2	kg	- Nil -						
/06	P.V.C. drain pipes, D. 100 mm	F.4.3	m	- Nil -						
/07	P.V.C. pipe, D.75 mm for weephole	F.4.3	m	- Nil -						
/08	Dowel bars, D.22 mm	E.26.3	ton	0.4						
/09	Anchor rod with steel pipe, D.32 mm for bridge shoe	G.14.2	kg	- Nil -						
Subtotal of Item 13.6										
TOTAL OF ITEM 13										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
14. LA SECA ACCESS ROAD										
14.1 EARTH WORKS										
/01	Clearing the site along access road	C.2.3	m ²	55,100						
/02	Open-cut excavation, in common including weathered rock	C.5.5	m ³	2,400						
/03	Open-cut excavation, in rock	C.5.5	m ³	100						
/04	Embankment (excavated material to embankment portion, including transportation up to 500 m)	G.7.4	m ³	41,900						
/05	Embankment (excavated material to embankment portion, including transportation more than 500 m)	G.7.4	m ³	1,760						
/06	Compaction of original ground	G.7.4	m ²	1,080						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Sod facing	C.20.2	m ²	25,200						
/08	Gabion for slope protection	C.18.2	m ³	- Nil -						
Subtotal of Item 14.1										
14.2	EXCAVATION AND FILLING FOR STRUCTURES									
Bridge										
/01	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/02	Backfill with selected material	C.7.6	m ³	- Nil -						
/03	Free draining backfill	C.7.6	m ³	- Nil -						
/04	Gravel bedding	C.7.6	m ³	- Nil -						
Box Culverts										
/05	Open-cut excavation, all classes	G.6.2	m ³	207						
/06	Backfill with selected material	C.7.6	m ³	52						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Free draining backfill	C.7.6	m ³	83						
/08	Gravel bedding Retaining Wall	C.7.6	m ³	6						
/09	Open-cut excavation, all class	G.6.2	m ³	- Nil -						
/10	Backfill with selected material	C.7.6	m ³	- Nil -						
/11	Free draining backfill	C.7.6	m ³	- Nil -						
/12	Gravel bedding	C.7.6	m ³	- Nil -						
Subtotal of Item 14.2										
14.3 CULVERT AND DRAINAGE WORKS										
/01	Open-cut excavation, all classes	G.6.2	m ³	830						
/02	Backfill with selected material	C.7.6	m ³	259						
/03	Crushed stone bedding	C.7.6	m ³	16						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Reinforced concrete pipe, D.600 mm	F.2.2	m	52						
/05	Reinforced concrete pipe, D. 800 mm	F.2.2	m	46						
/06	Reinforced concrete pipe, D.1,000 mm	F.2.2	m	- Nil -						
/07	P.V.C. perforated drain pipe, D.200 mm	F.4.2	m	2,040						
/08	Free drainage material for subdrain	C.7.6	m ³	425						
/09	Concrete, class E, for pipe culvert and wing walls	E.12	m ³	84						
/10	Concrete, class F, for side ditch and catch basin	E.12	m ³	522						
/11	Concrete, class H, for levelling concrete	E.12	m ³	9						
/12	Formwork, F1 finish, for concrete of Items /09, /10 and /11	E.13.8	m ²	328						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/13	Formwork, F3 finish, for concrete of Items /09 and /10	E.13.8	m ²	4,370						
/14	Reinforcing bars for concrete works	E.14.3	ton	6						
/15	Gabion mattress, t= 500 mm	C.18.2	m ³	154						
/16	Joint filler, t= 10 mm	E.24.3	m ²	- Nil -						
/17	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
Subtotal of Item 14.3										
14.4	CONCRETE WORKS									
/01	Concrete, class A, for bridge slab and girders	E.12	m ³	- Nil -						
/02	Concrete, class E, for bridge abutments and piers	E.12	m ³	- Nil -						
/03	Concrete, class E, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	box culvert	E.12	m ³	123						
/04	Concrete, class H, for levelling concrete	E.12	m ³	12						
/05	Rubble concrete for retaining wall (concrete, class E and rubble/boulder)	E.12	m ³	- Nil -						
/06	Formwork, F1 finish, for concrete of Items /02, /03, /04 and /05	E.13.8	m ²	221						
/07	Formwork, F2 finish, for concrete of Items /01, /02 and /05	E.13.8	m ²	- Nil -						
/08	Formwork, F3 finish, for concrete of Items /02 and /03	E.13.8	m ²	248						
/09	Reinforcing bars for concrete works	E.14.5	ton	10						
/10	Joint filler for culvert, t= 10 mm	E.24.3	m ²	7						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/11	Joint filler for expansion joint of bridge, t= 20 mm	E.24.3	m ²	- Nil -						
/12	Bituminous coating for contraction joint	E.25.2	m ²	14						
Subtotal of Item 14.4										
14.5 PAVEMENT										
/01	Improved subgrade material, not less than corrected CBR 12	G.8.4	m ³	2,100						
/02	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	2,320						
/03	Transportation of improved subgrade material	G.8.4	m ³ .km	1,050						
Subtotal of Item 14.5										
14.6 MISCELLANEOUS										
/01	Guardrail	G.12.2	m	- Nil -						
/02	Warning signs	G.13.2	nos.	15						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Bearing, fixed type	G.14.2	nos.	- Nil -						
/04	Bearing, movable type	G.14.2	nos.	- Nil -						
/05	Steel handrails for bridge deck	H.7.2	kg	- Nil -						
/06	P.V.C. drain pipes, D. 100 mm	F.4.3	m	- Nil -						
/07	P.V.C. pipe, D.75 mm for weephole	F.4.3	m	- Nil -						
/08	Dowel bars, D.22 mm	E.26.3	ton	0.2						
/09	Anchor rod with steel pipe, D.32 mm for bridge shoe	G.14.2	kg	- Nil -						
Subtotal of Item 14.6										
TOTAL OF ITEM 14										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
15.	LOS CUYUYES ACCESS ROAD									
15.1	EARTH WORKS									
/01	Clearing the site along access road	C.2.3	m ²	220,500						
/02	Open-cut excavation, in common including weathered rock	C.5.5	m ³	20,800						
/03	Open-cut excavation, in rock	C.5.5	m ³	200						
/04	Embankment (excavated material to embankment portion, including transportation up to 500 m)	G.7.4	m ³	195,100						
/05	Embankment (excavated material to embankment portion, including transportation more than 500 m)	G.7.4	m ³	41,700						
/06	Compaction of original ground	G.7.4	m ²	5,600						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Sod facing	G.20.2	m ²	95,900						
/08	Gabion for slope protection	C.18.2	m ³	741						
Subtotal of Item 15.1										
15.2 EXCAVATION AND FILLING FOR STRUCTURES										
Bridge										
/01	Open-cut excavation, all classes	G.6.2	m ³	1,830						
/02	Backfill with selected material	C.7.6	m ³	2,720						
/03	Free draining backfill	C.7.6	m ³	62						
/04	Gravel bedding	C.7.6	m ³	27						
Box Culverts										
/05	Open-cut excavation, all classes	G.6.2	m ³	1,120						
/06	Backfill with selected material	C.7.6	m ³	309						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Free draining backfill	C.7.6	m ³	494						
/08	Gravel bedding Retaining Wall	C.7.6	m ³	35						
/09	Open-cut excavation, all class	G.6.2	m ³	- Nil -						
/10	Backfill with selected material	C.7.6	m ³	- Nil -						
/11	Free draining backfill	C.7.6	m ³	- Nil -						
/12	Gravel bedding	C.7.6	m ³	- Nil -						
Subtotal of Item 15.2										
15.3 CULVERT AND DRAINAGE WORKS										
/01	Open-cut excavation, all classes	G.6.2	m ³	9,050						
/02	Backfill with selected material	C.7.6	m ³	2,870						
/03	Crushed stone bedding	C.7.6	m ³	236						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/04	Reinforced concrete pipe, D.600 mm	F.2.2	m	1,125						
/05	Reinforced concrete pipe, D.800 mm	F.2.2	m	152						
/06	Reinforced concrete pipe, D.1,000 mm	F.2.2	m	87						
/07	P.V.C. perforated drain pipe, D.200 mm	F.4.2	m	21,480						
/08	Free drainage material for subdrain	C.7.6	m ³	4,480						
/09	Concrete, class E, for pipe culvert and wing walls	E.12	m ³	693						
/10	Concrete, class F, for side ditch and catch basin	E.12	m ³	2,020						
/11	Concrete, class H, for levelling concrete	E.12	m ³	47						
/12	Formwork, F1 finish, for concrete of Items /09, /10 and /11	E.13.8	m ²	2,920						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/13	Formwork, F3 finish, for concrete of Items /09 and /10	E.13.8	m ²	17,020						
/14	Reinforcing bars for concrete works	E.14.3	ton	38						
/15	Gabion mattress, t= 500 mm	C.18.2	m ³	711						
/16	Joint filler, t= 10 mm	E.24.3	m ²	- Nil -						
/17	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
Subtotal of Item 15.3										
15.4 CONCRETE WORKS										
/01	Concrete, class A, for bridge slab and girders	E.12	m ³	156						
/02	Concrete, class E, for bridge abutments and piers	E.12	m ³	452						
/03	Concrete, class E, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	box culvert	E.12	m ³	742						
/04	Concrete, class H, for levelling concrete	E.12	m ³	84						
/05	Rubble concrete for retaining wall (concrete, class E and rubble/boulder)	E.12 & G.5.2	m ³	- Nil -						
/06	Formwork, F1 finish, for concrete of Items /02, /03, /04 and /05	E.13.8	m ²	1,630						
/07	Formwork, F2 finish, for concrete of Items /01, /02 and /05	E.13.8	m ²	778						
/08	Formwork, F3 finish, for concrete of Items /02 and /03	E.13.8	m ²	1,430						
/09	Reinforcing bars for concrete works	E.14.3	ton	113.3						
/10	Joint filler for culvert, t= 10 mm	E.24.3	m ²	35						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/11	Joint filler for expansion joint of bridge, t= 20 mm	E.24.3	m ²	4						
/12	Bituminous coating for contraction joint	E.25.2	m ²	55						
Subtotal of Item 15.4										
15.5 PAVEMENT										
/01	Improved subgrade material, not less than corrected CBR 12	G.8.4	m ³	12,390						
/02	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	12,870						
/03	Transportation of improved subgrade material	G.8.4	m ³ .km	6,190						
Subtotal of Item 15.5										
15.6 MISCELLANEOUS										
/01	Guardrail	G.12.2	m	40						
/02	Warning signs	G.13.2	nos.	58						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
/03	Bearing, fixed type	G.14.2	nos.	4						
/04	Bearing, movable type	G.14.2	nos.	4						
/05	Steel handrails for bridge deck	H.7.2	kg	1,900						
/06	P.V.C. drain pipes, D. 100 mm	F.4.3	m	4						
/07	P.V.C. pipe, D.75 mm for weephole	F.4.3	m	111						
/08	Dowel bars, D.22 mm	E.26.3	ton	0.7						
/09	Anchor rod with steel pipe, D.32 mm for bridge shoe	G.14.2	kg	- Nil -						
Subtotal of Item 15.6										
TOTAL OF ITEM 15										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
16. POZA HONDA INLET ACCESS ROAD										
16.1 EARTH WORKS										
/01	Clearing the site along access road	C.2.3	m ²	13,100						
/02	Open-cut excavation, in common including weathered rock	C.5.5	m ³	4,640						
/03	Open-cut excavation in rock	C.5.5	m ³	100						
/04	Embankment (excavated material to embankment portion, including transportation up to 500 m)	G.7.4	m ³	24,800						
/05	Embankment (excavated material to embankment portion, including transportation more than 500 m)	G.7.4	m ³	- Nil -						
/06	Compaction of original ground	C.7.4	m ²	271						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/07	Sod facing	C.20.2	m ²	5,730						
/08	Gabion for slope protection	C.18.2	m ³	90						
Subtotal of Item 16.1										
16.2	EXCAVATION AND FILLING FOR STRUCTURES									
Bridge										
/01	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/02	Backfill with selected material	C.7.6	m ³	- Nil -						
/03	Free draining backfill	C.7.6	m ³	- Nil -						
/04	Gravel bedding	C.7.6	m ³	- Nil -						
Box Culverts										
/05	Open-cut excavation, all classes	G.6.2	m ³	- Nil -						
/06	Backfill with selected									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	material	C.7.6	m ³	- Nil -						
/07	Free draining backfill	C.7.6	m ³	- Nil -						
/08	Gravel bedding Retaining Wall	C.7.6	m ³	- Nil -						
/09	Open-cut excavation, all class	G.6.2	m ³	- Nil -						
/10	Backfill with selected material	C.7.6	m ³	- Nil -						
/11	Free draining backfill	C.7.6	m ³	- Nil -						
/12	Gravel bedding	C.7.6	m ³	- Nil -						
Subtotal of Item 16.2										
16.3	CULVERT AND DRAINAGE WORKS									
/01	Open-cut excavation, all classes	G.6.2	m ³	289						
/02	Backfill with selected material	C.7.6	m ³	138						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Crushed stone bedding	C.7.6	m ³	29						
/04	Reinforced concrete pipe, D.600 mm	F.2.2	m	133						
/05	Reinforced concrete pipe, D. 800 mm	F.2.2	m	- Nil -						
/06	Reinforced concrete pipe, D.1,000 mm	F.2.2	m	- Nil -						
/07	P. V. C. perforated drain pipe, D.200 mm	F.4.2	m	267						
/08	Free drainage material for subdrain	C.7.6	m ³	56						
/09	Concrete, class E, for pipe culvert and wing walls	E.12	m ³	73						
/10	Concrete, class F, for side ditch and catch basin	E.12	m ³	96						
/11	Concrete, class H, for levelling concrete	E.12	m ³	2						
/12	Formwork, F1 finish, for									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	concrete of Items 09, /10 and /11.	E.13.8	m ²	276						
/13	Formwork, F3 finish, for concrete of Items /09 and /10	E.13.8	m ²	777						
/14	Reinforcing bars for concrete works	E.14.3	ton	6						
/15	Gabion mattress, t= 500 mm	C.18.2	m ²	18						
/16	Joint filler, t= 10 mm	E.24.3	m ²	- Nil -						
/17	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
Subtotal of Item 16.3										
16.4 CONCRETE WORKS										
/01	Concrete, class A, for bridge slab and girders	E.12	m ³	- Nil -						
/02	Concrete, class E, for bridge abutments and piers	E.12	m ³	- Nil -						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/03	Concrete, class E, for box culvert	E.12	m ³	- Nil -						
/04	Concrete, class H, for levelling concrete	E.12	m ³	- Nil -						
/05	Rubble concrete for retaining wall (concrete, class E and rubble/boulder)	E.12 & G.5.2	m ³	- Nil -						
/06	Formwork, F1 finish, for concrete of Items /02, /03, /04 and /05	E.13.8	m ²	- Nil -						
/07	Formwork, F2 finish, for concrete of Items /01, /02 and /05	E.13.8	m ²	- Nil -						
/08	Formwork, F3 finish, for concrete of Items /02 and /03	E.13.8	m ²	- Nil -						
/09	Reinforcing bars for concrete works	E.14.3	ton	- Nil -						
/10	Joint filler for culvert,									

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
	t= 10 mm	E.24.3	m ²	- Nil -						
/11	Joint filler for expansion joint of bridge, t= 20 mm	E.24.3	m ²	- Nil -						
/12	Bituminous coating for contraction joint	E.25.2	m ²	- Nil -						
Subtotal of Item 16.4										
16.5 PAVEMENT										
/01	Improved subgrade material, not less than corrected CBR 12	G.8.4	m ³	559						
/02	Graded crushed stone subbase, not less than corrected CBR 60	G.9.5	m ³	600						
/03	Transportation of improved subgrade material	G.8.4	m ³ .km	280						
Subtotal of Item 16.5										
16.6 MISCELLANEOUS										
/01	Guardrail	G.12.2	m	- Nil -						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/02	Warning signs	G.13.2	nos.	4						
/03	Bearing, fixed type	G.14.2	nos.	- Nil -						
/04	Bearing, movable type	G.14.2	nos.	- Nil -						
/05	Steel handrails for bridge deck	H.7.2	kg	- Nil -						
/06	P.V.C. drain pipes, D. 100 mm	F.4.3	m	- Nil -						
/07	P.V.C. pipe, D.75 mm for weephole	F.4.3	m	- Nil -						
/08	Dowel bars, D.22 mm	E.26.3	ton	- Nil -						
/09	Anchor rod with steel pipe, D.32 mm for bridge shoe	G.14.2	kg	- Nil -						
Subtotal of Item 16.6										
TOTAL OF ITEM 16										

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/)		Equivalent Price (S/)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
17.	DAULE PERIPA 138 KV SWITCHGEAR YARD									
17.1	EARTH WORKS									
/01	Trench excavation, all classes, for foundation of equipment	C.6.2	m ³	210						
/02	Trench excavation, all classes, for cable duct	C.6.2	m ³	50						
/03	Backfilling, for foundation of equipment and cable duct	C.7.6	m ³	200						
/04	Gravel bedding for foundation of equipment and cable duct	C.7.6	m ³	19						
	Subtotal of Item 17.1									
17.2	CONCRETE WORKS									
/01	Concrete, class E, for foundation of equipment	E.12	m ³	63						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/L)		Equivalent Price (S/L)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
/02	Concrete, class F, for cable duct	E.12	m ³	16						
/03	Concrete, class, H, for levelling concrete of foundation of equipment and cable duct	E.12	m ³	10						
/04	Formwork, F1 finish, for concrete of Item /01	E.13.8	m ²	185						
/05	Formwork, F1 finish, for concrete of Item /02	E.13.8	m ²	81						
/06	Formwork, F2 finish, for concrete of Item /02	E.13.8	m ²	52						
/07	Reinforcing bars for concrete works	E.14.3	ton	3.2						
Subtotal of Item 17.2										
17.3	MISCELLANEOUS METAL WORKS									
/01	Embedded metal	H.13.2	kg	635						
/02	Checkered plate for cable duct	H.10.2	kg	693						

BILL OF QUANTITIES

Item No.	Description of Works	Payment Item No.	Unit	Quantity	Foreign Currency (US\$)		Local Currency (S/.)		Equivalent Price (S/.)	
					Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price
			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Subtotal of Item 17.3

TOTAL OF ITEM 17

Gentlemen
**CENTRO DE RAHABILITACION
DE MANABI (CRM)**
Portoviejo

Ref.: **SUMMARY OF THE TENDER**

The subscribed: _____
(Name of the Legal Representative)

Legal Representative of _____
declares that the value of this Tender, in accordance with the (Tendering No. _____)
Tender Documents, and with the unit prices and lump sum prices of the Work and Bill of
Quantities, is of _____
Suces, plus _____ (indicate the type of currency).

The period of completion of the works will be of 54 months, from the day that the
commencement order is issued.

If our Tender is accepted, we will contract a bond for an amount not less than 5% of the total
price of the Contract so to assure the performance of the Contract.

We agree to maintain the validity of this tender for a period of 180 calendar days from the
date established for the opening of the Envelopes.

The subscribed has verified carefully the figures and information submitted with this Tender,
and states that CRM will not assume responsibility for any error or omission by the
commitments that the Tenderer might have acquired for the preparation of the Tender.

This Tender, jointly with its acceptance by writing included in the awarding notification,
constitutes a Obligatory Commitment until the preparation and signing of the Formal
Contract.

Legal Representative

Place and Date