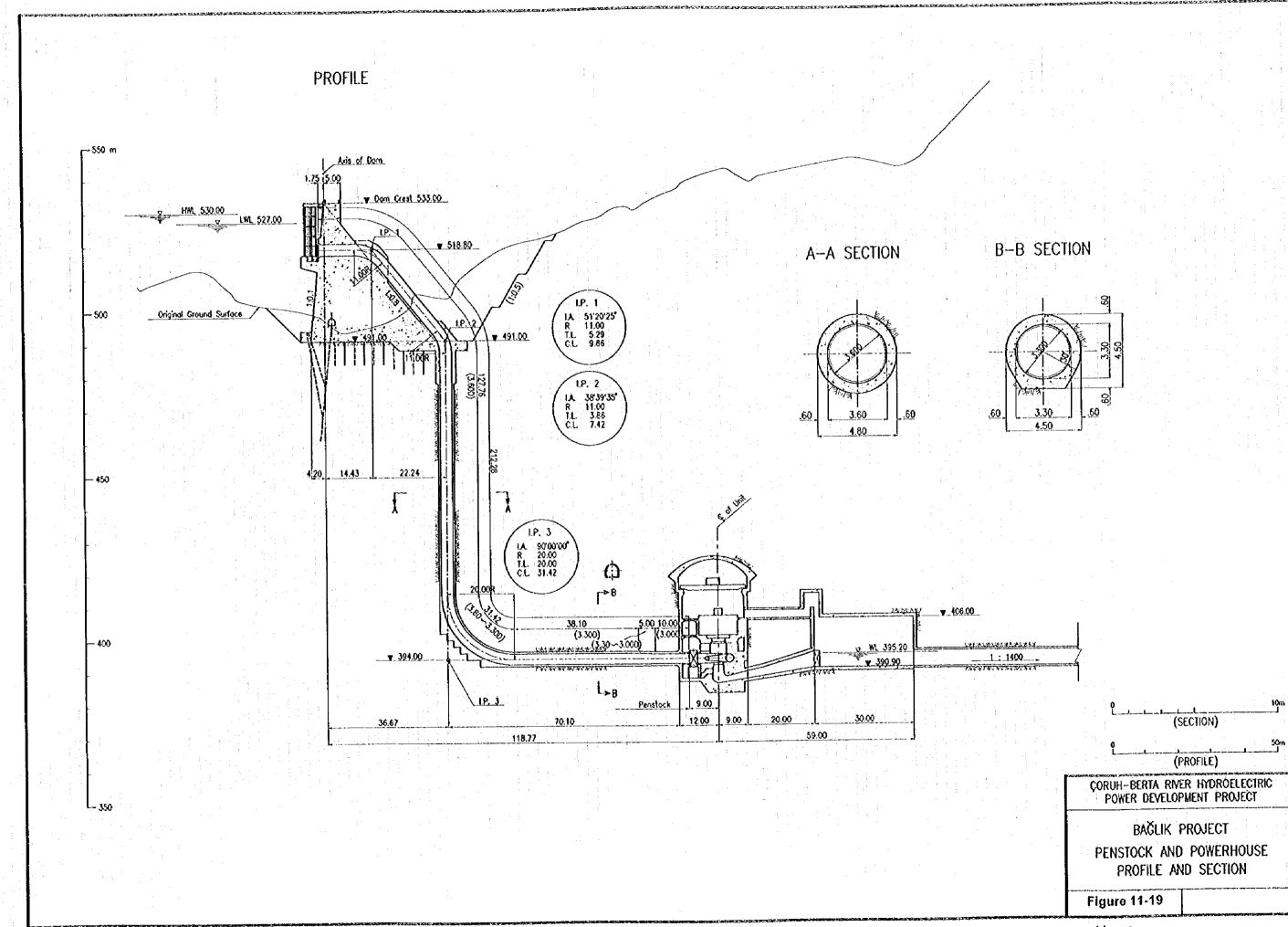
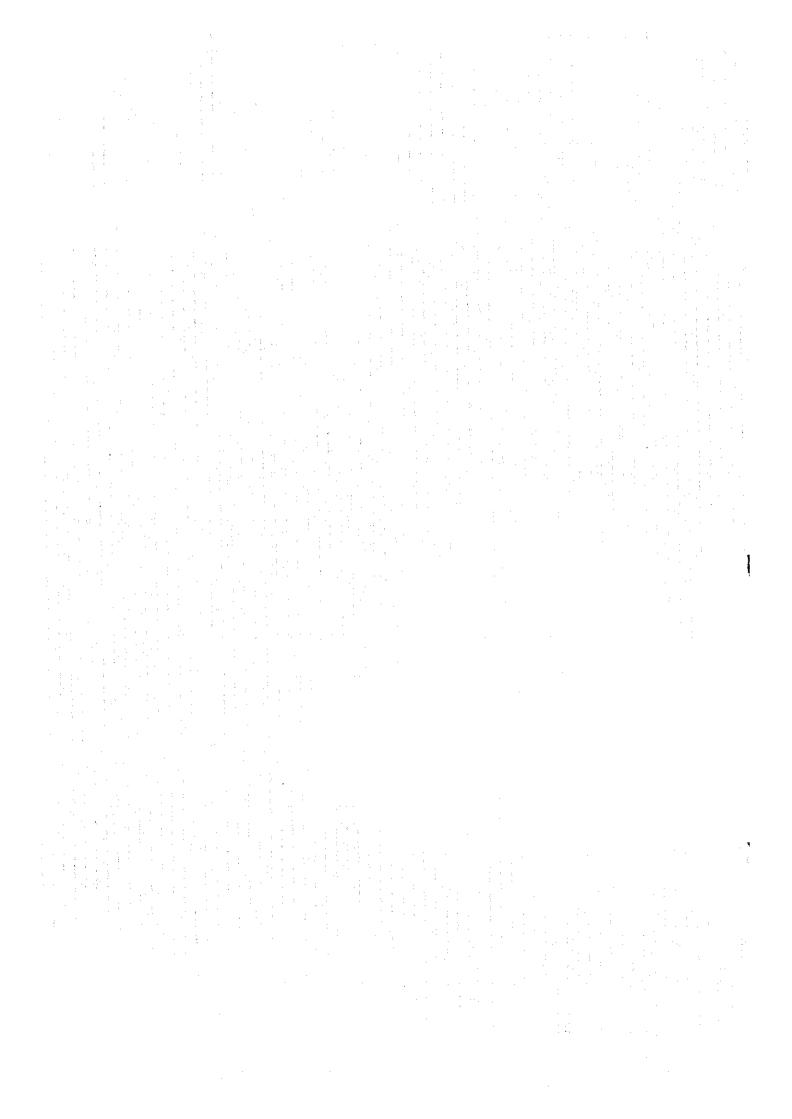
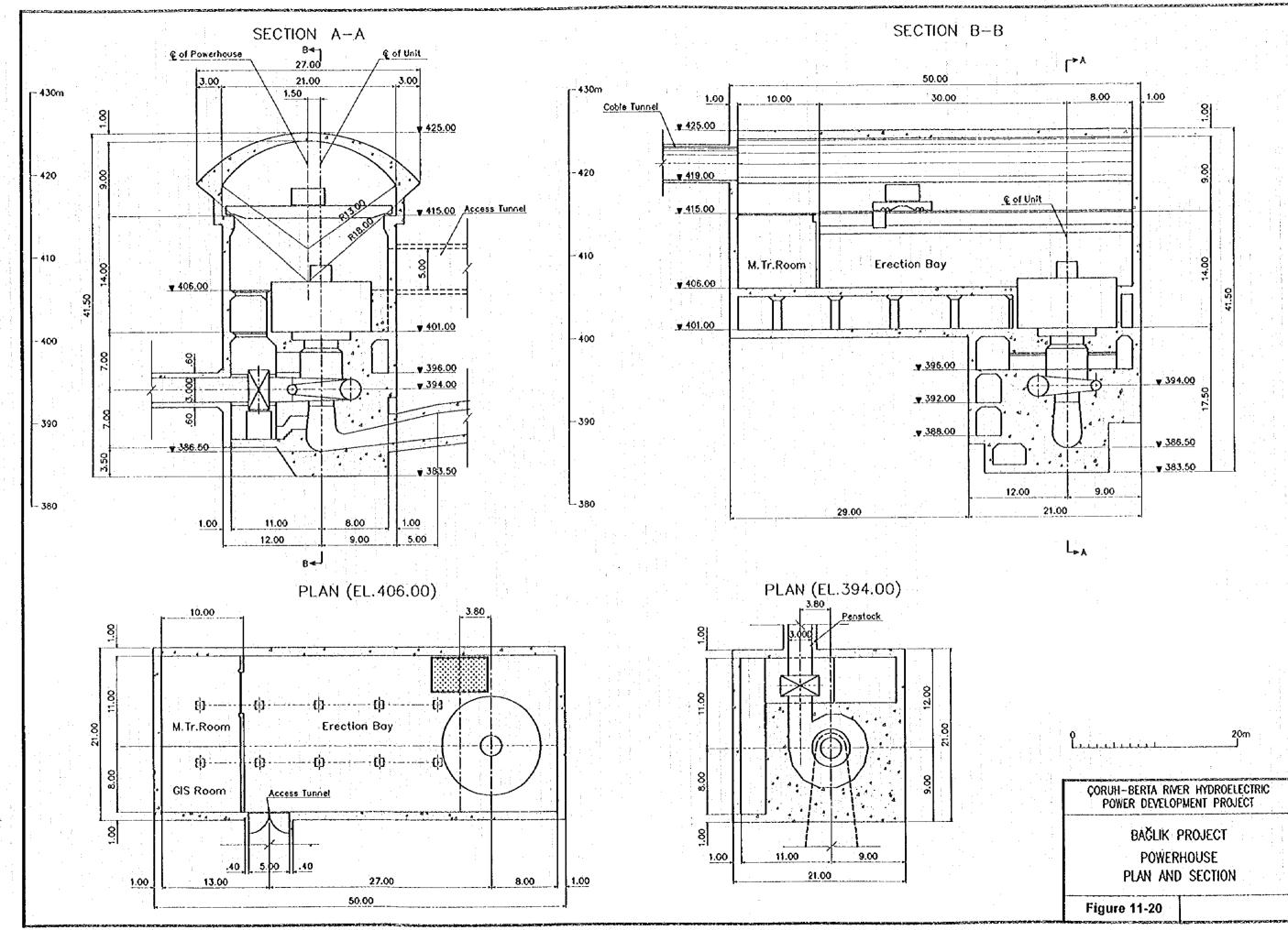


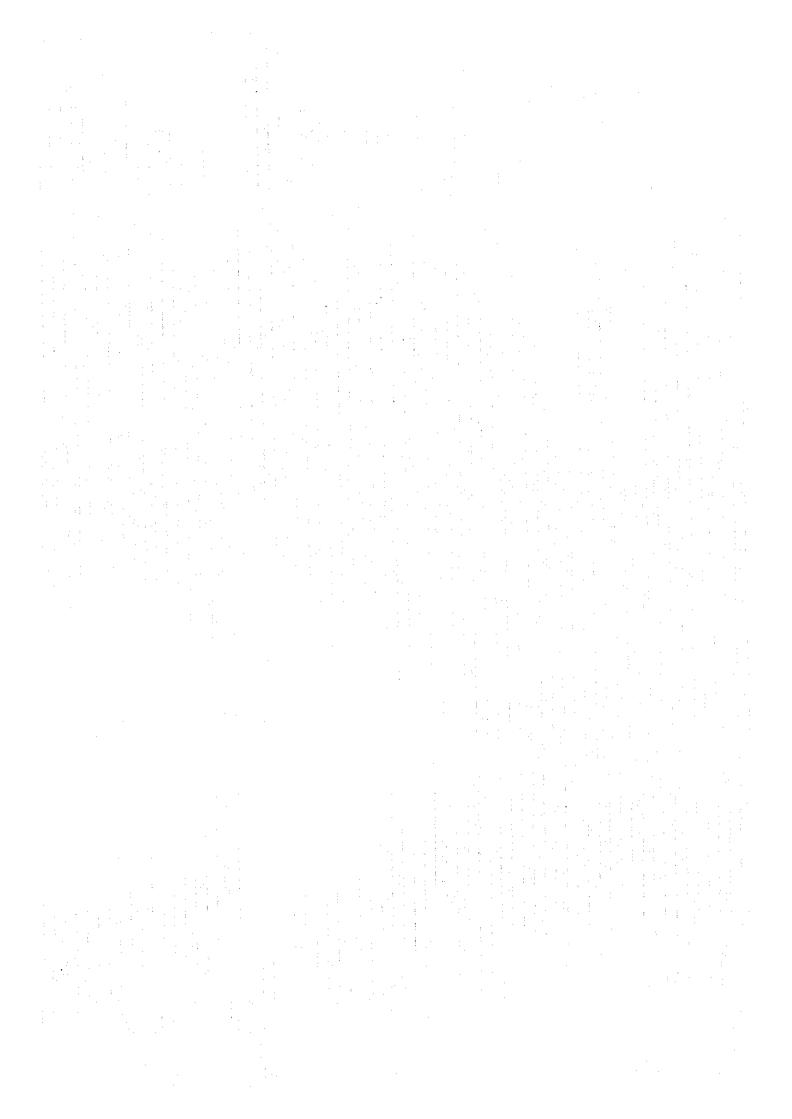
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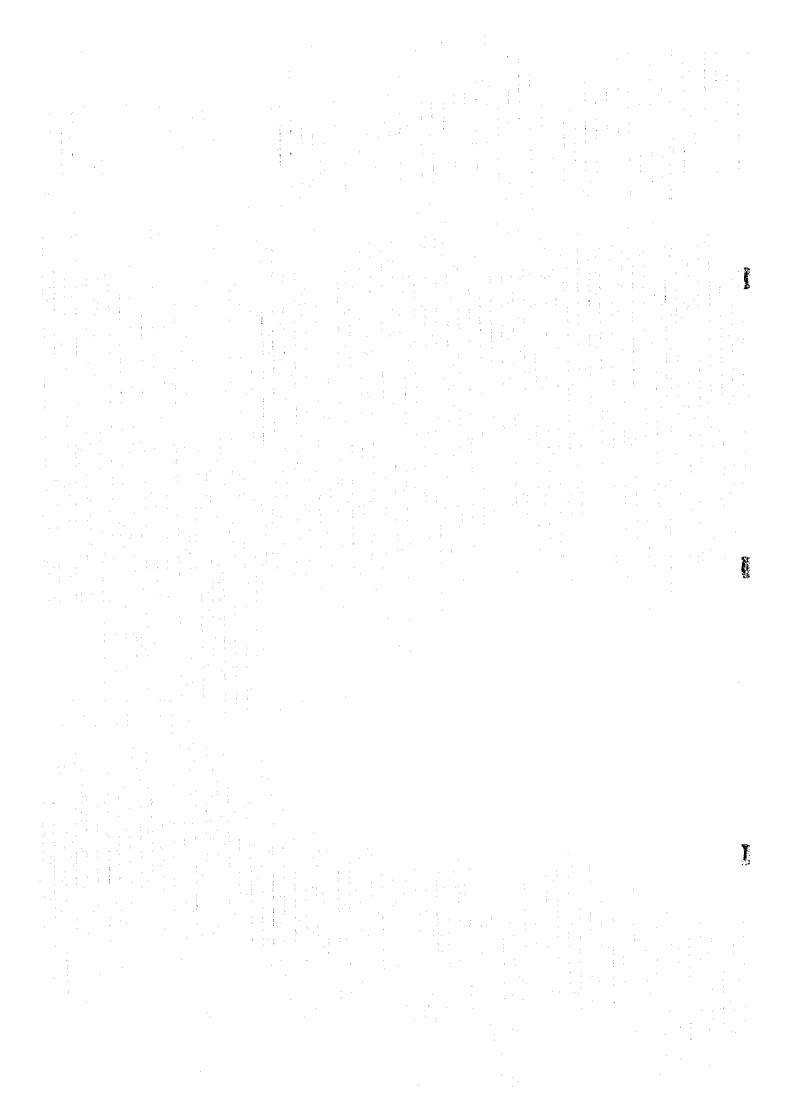


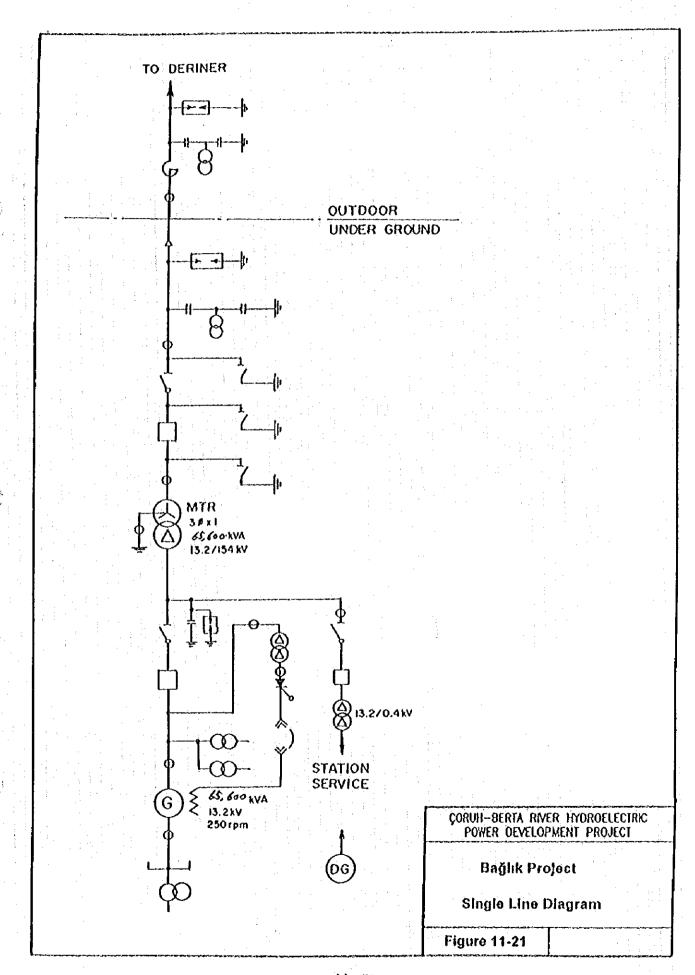


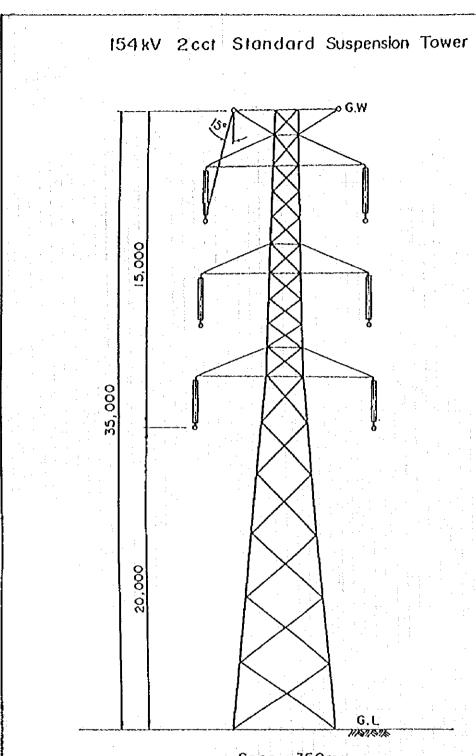


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**Span = 350m** 

CORUH-BERTA RIVER INDROELECTRIC POWER DEVELOPMENT PROJECT

Standard Suspension Tower (154 kV 2cct)

Figure 11-22

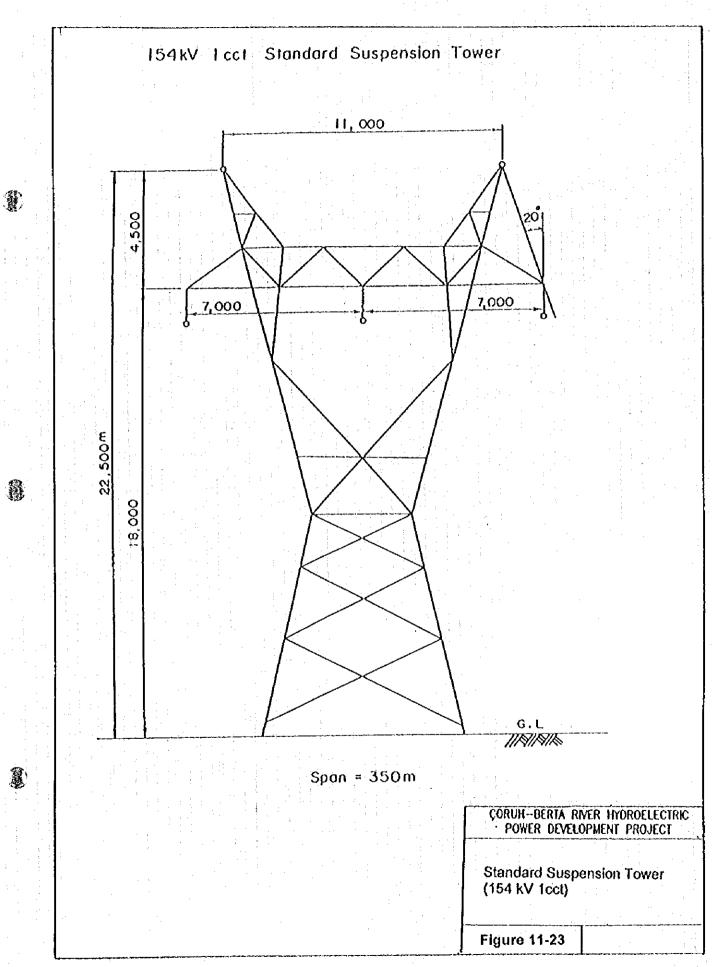


Table 11-1 Comparison Study of Dam Type Bayram Project

	~~~ <b>~</b>	Rockfill Type	Concrete Gravity Type
	T Cent	(Spillway : Chote)	(Spillway : Center overflow)
	:	12.00	DAM AXIS
			H.W.L 740.00
Typical Section	tion	" LWL 686.00 1 F	0
		00,009	00 000
		Dam Height 145 m	Dam Height 145 m
مینان	Upstream	1.2.3	1 : 0.1 / 0.8
	Downstream	7.2.0	1 : 0.85
Care of River	тə	Diversion Tunnel $L = 795 \text{ m}$	Diversion Tunnel L = 580 m
Dam Volume		6,200,000 m³	1,724,000 m³
Construction Cost	Construction Cost (Care of River, Dam, Spillway)	58,307 × 10³ \$	\$ col × col × 22
Ratio of Co	Ratio of Construction Cost	001 The second of the second o	134

Table 11-2 Comparison Study on Berta Project for Optimization of Number of Unit

Bayram Project Talinace Type	e Undergro.	P/S Layou	H.W.L.=74	Om with Ba	glik H.W.L	.= 530.00m	2 Unit 1 t
Description Dam Site	<u> </u>	Bayram	Baglik	Total	Bayram	Baglik	Total
· · · · · · · · · · · · · · · · · · ·	Unit	2 Unit	2 Unit		1 Unit	1 Unit	
High Water Level	m	740.00	530.00		740.00	530.00	
Normal Water Level	m	722.00	528.50		722.00	1	
Low Water Level	m	686.00	527.00		686.00		
Available Orawdown	m	54.00	3.00		54.00		
Gross Storage Capacity	m^3*10^6	133.00	7.30		133.00		
Effective Storage Capacity	m^3*10^6	113.00	1.00		113.00	1.00	
Dam Type		Rockfill	Con-Gra.	1.5	Rockfill	Con-Gra.	
Dam Hight	m	145	74	1.4	145		
Dam Volume	m^3	6,144	195		6,144	195	
Tailwater Level	m	530.00	392.00		530.00		
Effective Head	m	182.90	130,90		182.90		
Maximum Discharge	m^3/s	43.00	52.00		43.00		
Installed Capacity	MW	67.18	59.00	126.18	68.00		-
Firm Peak Power	MW	57.30	55.72	113.03	58.00	56.40	114,40
Energy Production							
Average Energy	GWh	244.93	218.74	463.67	237.24	211.88	449.1
Firm Energy	GWh	139.70	122.71	262.41	135.32	118.86	254.1
Secondary Energy	GWh	105.22	96.03	201.26	101.92	93.02	194.9
Unit Benefit Value		0.00	0.00		0.00	0.00	
Firm Peak Power	US\$/kW	180.45	180.45		180.45		1 .
Firm Energy	US\$/kWh	0,027	0.027		0.027	0.027	
Secondary Energy	US\$/kWh	0,022	0.022		0.022	0.022	
Benefit	1					1.1	1 1
Firm Peak Power	US\$*10*6	9.86	9.59	19.45	9.98	9.71	19.6
Firm Energy	US\$*10*6	3.71	3.26	6.96	3,59		
Secondary Energy	US\$*10'6	2.27	2.07	4.33			
Total	US\$10'6	15.83	14.91	30.75	15.77	14.86	30.6
Investment Cost					1 1 1	1	
Civil Facilities	US\$110/6	148.96	54.38	203.33			
Hydrau, and EleMech.Eq.	US\$*10^6			53.20	24.32		
Total	US\$1106	176.47	80.06	258.54	172,06	79,46	251.5
Annual Cost							1 . ; .
Civil Facilities	US\$*10\6	15.04	5.49	20.54	14.92		
Hydrau, and EleMech.Eq.	US\$100	3.14	2.93	6.07	2.77		P
Total	US\$*10'6		8.42	26.60	17.69		
Annual Surplus Benefit(B-C)	US\$*10^6	-2.35	6.49	4,15	-1.93	6.50	
Benefit Cost Ratio(B/C)		0.87	1.77	1.16	0.89	1.78	
Unit Annual Cost (Firm)	US\$/kWh	0.130	0.069	0.101	0.131		
Unit Annual Cost (Average)	US\$/kWh	0.074	0.038	0.057	0.075	0.039	0.058

Table 11-3 Major Item of Bayram Power Station

Equipment	Item	The second secon
Hydraulic Turbine	Type	Vertical shaft. Francis
	Number of units	
	Normal Effective head	182.90 m
	Maximum discharge	43 m³/s
	Turbine output	69,500 kw
	Revolving speed	300.mgm
Generator	Type	Three phases, alternating current, synchronous
\$	Number of units	
	Output	75,400 KVA
	Power factor	6.0
	Voltage	13.2 kV
	Frequency	50 Hz
	Revolving speed	300 rpm
Main Transformer	Type	Outdoor, three phases, forced-oil-forced-air cooled type
	Number of units	
	Capacity	75,400 kVA
	Primary voltage	13:2 kV
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Secondary voltage	154KV
	Connection	Delta/Star
Outdoor Switchyard		Single bus + transfer bus
	Bus system	Aluminum pipe
the state of the s	Lines connected	154 kV1cct

Dam Keight 74 m 10,765,000 \$ 3 000/121/51 195,000 m<sup>3</sup> 240,000 m<sup>3</sup> 100 132 Care of River, Dam, Spillway) Care of River, Dam, Spillway) Ratio of Construction Cost Ratio of Construction Cost Construction Cost Construction Cost Dam Volume Dam Volume Comparison Study of Dam Axis Bağlık Project MENU Selected Dam Site Original Dam Site = 225 PROFILE 450 ဒ္ဌ . දූ 450 Table 11-4 Site LOCATION Granite Yusufeli formation

Table 11-5 Comparison Study of Dam Type Bağlık Project

		Concrete-facing Rockfill Type	Concrete Gravity Type	Concrete Brok fime
	Item	vay Chutel		ייייין ייייין ייייין יייייין יייייין יייייי
		•	•,	OVERTION)
:		DAM AXIS		
		1000	DAM AXIS	DAM AXIS
···		H.W.L. 530.00	2H.W.L 530.00 2 533.00	H.W.L 530.00
		LW.L. 527.00	LW.L 527.00	LW.L 527.00
Typical Section	tion		10	
		***	1:03	/
		00.65%	10	00'657
			W Himmilannia V	
<del></del>				12.8
•		Dam Height 74 m	Dam Height 74 m	Dam Height 74 m
Slope	Upstream		1.20.1, .0.3	
4	Downstream	1.5.1.5	8.0.5	1
Care of River	40.	Diversion Tunnel L = 320 m	Partial River Closing	Diversion Tunnel
Dam Volume		523,000 m³	195,000 m3	137,000
Care of River, Dam	Construction Cost (Care of River, Dam, Spillway)	13,818 × 10³ \$	10,765 × 10³ Ş	11,464 × 10³ \$
Ratio of Co.	Ratio of Construction Cost	129	100	107

ble 11-6 Major Item of Bağlık Power Station

Equipment	Item	and the second of the second o
Hydraulic Turbine	Type	Vertical shaft, Francis
	Number of units	
	Normal Effective head	130.90 m
	Maximum discharge	52 m <sup>2</sup> /s
	Turbine output	60,500 kW
	Revolving speed	250 rpm
Generator	Type	Three phases, alternating current, synchronous
	Number of units	
	Output	65,600 kVA
	Power factor	60
	Voltage	13.2 kV
	Frequency	30 Hz
	Revolving speed	250 rpm
Main Transformer	Type	Inddor, three phases, forced-oil-forced-water cooled type
	Number of units	
	Capacity	65,600 kVA
	Primary voltage	13.2kV
	Secondary voltage	154kV
	Connection	Delta/Star
Switchyard Equipment Type	Type	Gas Insulated Metal Enclosed Switchgear (GIS)

# CHAPTER 12 CONSTRUCTION PROGRAM AND CONSTRUCTION COST

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# CHAPTER 12 CONSTRUCTION PROGRAM AND CONSTRUCTION COST

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Table 12-11	Construction Cost of Civil Works Bağlık Project (5)
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#### CHAPTER 12 CONSTRUCTION PROGRAM AND CONSTRUCTION COST

## 12.1 Construction Program and Construction Schedule

The Berta Project comprises two projects of Bayram and Bağlık. Of these two projects, Bağlık Project is planned and designed based on the prior development of Bayram Project. Therefore, it will be necessary for Bağlık Project not to develop prior to Bayram Project. In this study, construction programs and construction schedules were set up considering the simultaneous start of two project's construction.

#### 12.1.1 Basic Conditions

Matters on the construction programs and construction schedules in relation to construction of the power stations are as described below.

### (1) Meteorology

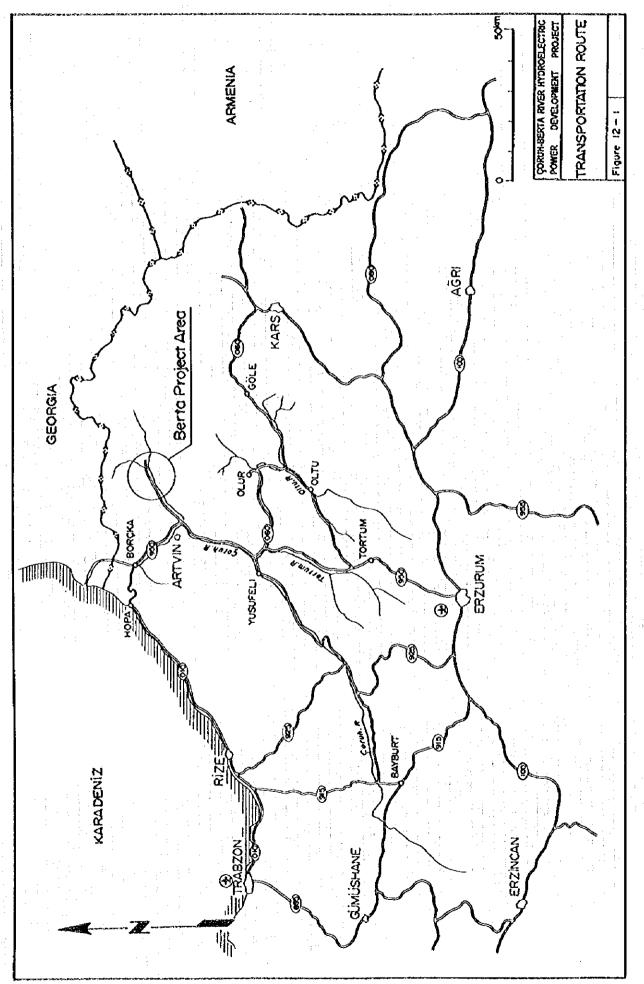
The meteorological conditions of the project area are as described in Chapter 6. In setting up the construction schedules, it was assumed that core embankment for the rockfill dam and placement of dam concrete in construction in this area would be possible 9 months out of the year, while with regard to other works, it would be possible to perform them throughout the year since there is not very much snow cover in this area.

#### (2) Transportation

The transportation routes to the project site consist of combinations of air, sea, rail transportation with highway.

Airports close to the project area are Trabzon and Erzurum, while seaports nearby are Trabzon and Hopa. The nearest railway stations are at Erzurum and Kars.

The roads from these nearby points to the project sites are as shown in Figure 12-1. From the direction of Trabzon and Hopa, National Highways No. 10 and No. 950 would be used to reach the Berta River confluence via Artvin, to reach the project sites along the Berta River.



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From the direction of Erzurum and Kars, the Berta River confluence is reached by National Highways No. 950 and No. 60, respectively, and from the confluence, the project sites are reached along the Berta River.

(3) Construction Materials

(a) Cement

For cement, the two cement mills in Kars and Erzurum are contemplated as the main sources of supply.

(b) Steel

For the main steel materials such as reinforcing bars and structural steel, the plants at Iskenderun or Karabak, both approximately about 1,000 km from the Berta project site would be the main supply factories.

(c) Concrete Aggregate

Concrete aggregate would be manufactured collecting and classifying the river-bed sandgravel distributed upstream and downstream of Bayram dam.

- (d) Embankment Materials
- (I) Bayram Dam

Core material is to be collected from extruded deposits at the borrow area at the left bank immediately downstream of the dam and this is to be transported and banked.

Of filter materials, fine-particled filter is to be excavated river-bed sand-gravel upon classification and manufacture for dam embankment. As coarse-particled filter, river-bed sand-gravel and comparatively fine-particled excavation muck are to be used for embankment.

Rock materials are to be obtained from a quarry planned at the right bank upstream of the dam, upon which they are to be transported and banked.

### (4) Electric Power for Construction

Electric power for construction would be supplied branching off from the transmission line which passes by the two project sites.

# (5) Hydraulic Equipment

Hydraulic equipment, except for steel penstock pipes and steel conduits, are to be manufactured in the outskirts of Istanbul, transported by sea to Hopa, and then transported overland by trailer from Hopa to project sites, or transported overland all the way from Istanbul (or a factory somewhere else) to project sites.

For steel penstock pipes and steel conduits, temporary factories are to be constructed in the field, where fabrication is to be done, and installation carried out at the sites.

## (6) Electromechanical Equipment

The main items of electromechanical equipment are to be manufactured overseas, unloaded at either of the ports of Hopa or Trabzon, transported overland by trailer to the field, and installed at the power stations.

# 12.1.2 Construction Program and Construction Schedule

The preparations to be made for the start of construction based on the rough schedule are as follows.

1995. 11 ~ 1997.12	Feasibility Study
1998.1 ~ 1998.6	Provision and Award of Final Design (0.5 years)
1998.7 ~ 1999.12	Final Design (1.5 years)
2000.1 ~ 2000.12	Financial Formulation (1 year)
2001.1 ~ 2001.12	Bidding and Award of Contract for Construction (1 year)
2002.1 ~ 2006.12	Construction (5 years)

## (1) Bayram Project

The outline of the project and the quantities of civil works are as given in Summary and Table 12-1.

The time schedule of construction work for the Bayram Project was studied taking into consideration construction scale, construction methods, etc., and as a result, it was determined that construction period of approximately 5 years would be required including preparations such as temporary facilities.

The layout plan for temporary facilities and work schedule for construction are shown in Figure 12-2 and Figure 12-3, respectively.

The critical path in the construction schedule of this project is the dam construction work. The construction program and the construction schedule would be described below.

## First Year:

For smooth execution of construction work, it is indispensable to secure land necessary for various structure works by such measures as relocating part of National Highway so that the traffic of vehicles in general will not be obstructed at the stretch of the highway from the end of the backwater of Deriner reservoir to the surroundings of Bayram dam, and constructing access roads as necessary for dam and powerhouse works by means of preparatory works before starting the construction work proper. Simultaneously with start of construction, materials procurement is to be done, the offices and quarters of the owner and contractor, materials yard, etc. are to be constructed, and site development and apparatus installation for temporary facilities such as the machinery repair factory, concrete plant, aggregate plant, etc. are to be started.

Table 12-1 Main Civil Works of Bayram Project

Description	Amount	of Works
Type: Horseshoe Pressure		
D: 5.70 m	Tunnel Ex	28,000 m <sup>3</sup>
L: 795 m	Lining Conc.	6,600 m <sup>3</sup>
Type: Rockfill	Em	$109 \times 10^3 \mathrm{m}^3$
Type: Rockfill	Ex. In open	$745 \times 10^3 \mathrm{m}^3$
Height: 145 m	Em. of Core	$868 \times 10^3 \mathrm{m}^3$
	Em. of Filter	$802 \times 10^3 \mathrm{m}^3$
	Em. of Rock	$4,367 \times 10^3 \mathrm{m}^3$
	Total Approx.	$6,200 \times 10^3 \mathrm{m}^3$
	(including coffer d	am)
Tunas Christa with Oataa		
	C. 1	595 x 10 <sup>3</sup> m <sup>3</sup>
Gate. 2 x 10.0 b x 12.5 h		
		47,800 m <sup>3</sup>
	Gate	2 sets
Type: Horizontal		
	Ex. In open	103,000 m <sup>3</sup>
	Concrete	6,200 m <sup>3</sup>
	Gate	1 set
Type: Circular Pressure		
	Tunnel Ex.	2,000 m <sup>3</sup>
L: 65 m	Lining Conc.	700 m <sup>3</sup>
		5,000 m <sup>3</sup>
L: 321 m	· · · · · · · · · · · · · · · · · · ·	2,300 m <sup>3</sup>
	Steel	600 t
Tunoi Iladoracound		
and the state of t	Cavara F	07.000 3
		27,000 m <sup>3</sup>
	in an experience of the first term of the first	9,100 m <sup>3</sup>
L. 44.0 III	Gate	1 set
Type: Horseshoe Non Press	sure	
		212,000 m <sup>3</sup>
		37,600 m <sup>3</sup>
	Gate	1 set
	Type: Horseshoe Pressure D: 5.70 m L: 795 m  Type: Rockfill  Type: Rockfill Height: 145 m  Type: Horizontal  Type: Circular Pressure D: 3.3 m L: 65 m  Type: Steel Embedded D: 3.3~2.5m L: 321 m  Type: Underground B: 19.0 m H: 41.0 m L: 44.5 m	Type: Horseshoe Pressure  D: 5.70 m L: 795 m Tunnel Ex L: 795 m Lining Conc.  Type: Rockfill Height: 145 m Em. of Core Em. of Filter Em. of Rock Total Approx. (including coffer d  Type: Shute with Gates Gate: 2 x 10.0 B x 12.5 H Ex. In open Concrete Gate  Type: Horizontal  Ex. In open Concrete Gate  Type: Circular Pressure D: 3.3 m L: 65 m Lining Conc.  Type: Steel Embedded D: 3.3~2.5m Tunnel Ex. Lining Conc.  Type: Steel Embedded D: 3.3.2.5m Tunnel Ex. Lining Conc.  Type: Underground B: 19.0 m Cavern Ex. H: 41.0 m Concrete Gate  Type: Horseshoe Non Pressure D: 4.6 m Tunnel Ex. Lining Conc.

#### Second Year:

Ŋ.

For the diversion tunnet, concrete placement is to be done in succession to excavation. Excavation for the dam, including spillway excavation, is to be started from the upper parts at the right and left banks. Open excavation for the inlet portion of the intake will be done. After completion of concrete lining and grouting work for diversion tunnet, switching of the river to the diversion tunnet is to be carried out immediately. After diversion, construction of the upstream and downstream cofferdams is to be started.

For works such as the cable tunnel to serve as a work adit for the powerhouse (arch portion work adit), powerhouse access tunnel (midheight work adit), tailrace work adit, etc., excavation is to be started as soon as temporary facilities have been completed.

#### Third Year:

Excavation of the river-bed portion of the dam is to be completed, foundation treatment grouting done, and embankment started, but prior to this embankment, the road for embankment materials transportation is to be constructed and the preparatory works for the various material collection points completed.

Grouting of the right- and left-bank wings, and of deep parts is to be done providing grouting tunnels, and the grouting is to be performed simultaneously with dam embankment work.

For the spillway, concrete placement work is to be carried out after completion of excavation.

Excavation works are to be started on the vertical shaft of the intake gate chamber and the inclined shaft of the penstock to be executed by the raise borer method. As the method of mucking out, for both the vertical shaft and the inclined shaft, after pilot reaming excavation, the reaming holes are to be used for enlargement, the enlargement muck is to be dropped down the vertical shaft and inclined shaft, and is to be hauled out by the intake tunnel and penstock work adit which have been connected to the shafts beforehand.

In powerhouse excavation, after excavation of the cable tunnel, excavation for enlargement of the arch section is to be done and muck is to be hauled out from the tunnel by truck.

At the powerhouse, arch concrete is to be placed immediately after excavation of the arch. After completion of concrete placement, bench cutting is to be done for excavation of the lower portion of the powerhouse. In bench cutting, a glory hole is to be provided and muck dropped down, and after working from the midheight work adit making use of the powerhouse access tunnel, muck is to be hauled out by truck.

Placement of concrete is to be started as excavation progresses. Liners of the draft tube are to be installed while foundation concrete is being placed.

Excavation of the tailrace tunnel is to be continued from maximum of six excavation faces using two work adits.

#### Fourth Year:

In dam construction, embankment works of core materials, filter materials and rock materials, and foundation treatment grouting are to be continued.

At the spillway, concrete for the pier, side walls, and invert are to be placed.

At the penstock, installation of steel pipe and placement of backfill concrete are to be performed, and in succession to this, lining concrete of the intake tunnel is to be placed. At the intake, concrete for the inlet and gate chamber vertical shaft are to be placed. Side wall and slab concrete of the powerhouse are to be more or less completed, and after installing crane girders, an overhead traveling crane is to be installed. When the crane has been installed, installation of electromechanical equipment such as the turbine and generator would be started.

Excavation of the tailrace tunnel is to be completed and lining concrete placed.

Construction of the transmission line is to be started.

#### Fifth Year:

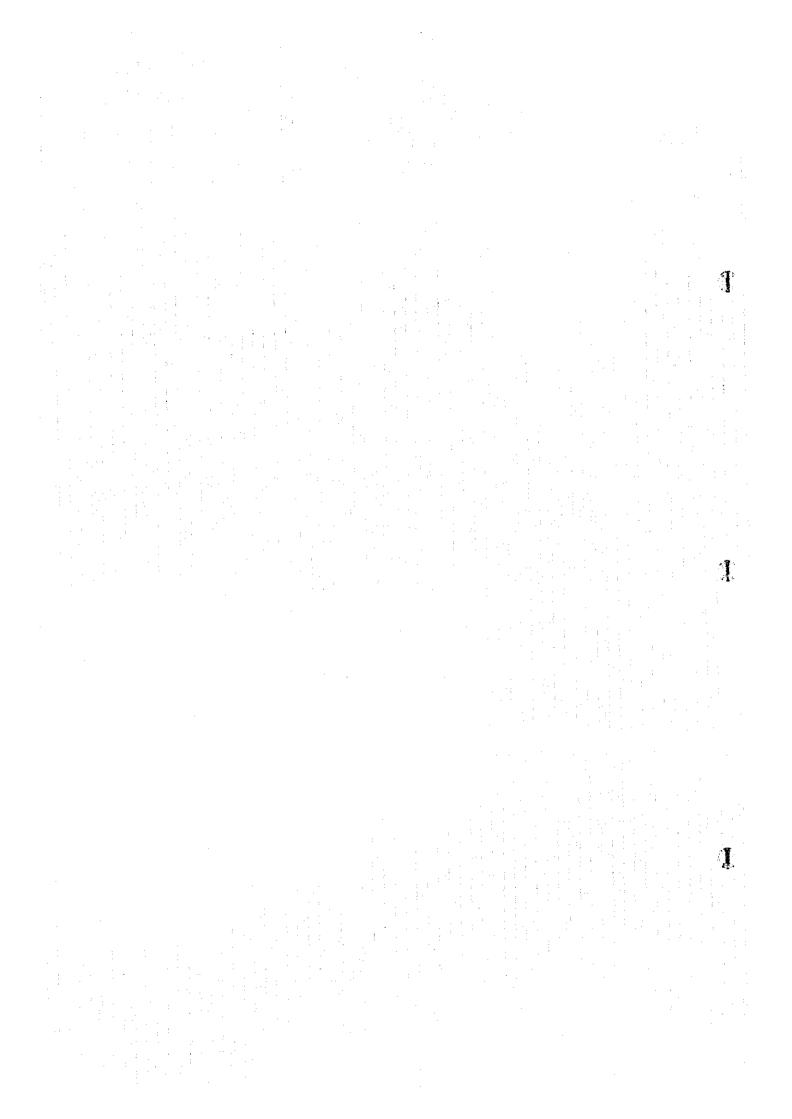
Embankment work of the dam and installation of gates at the spillway and intake are to be completed. Lining concrete work of the tailrace tunnel is to be completed, and following

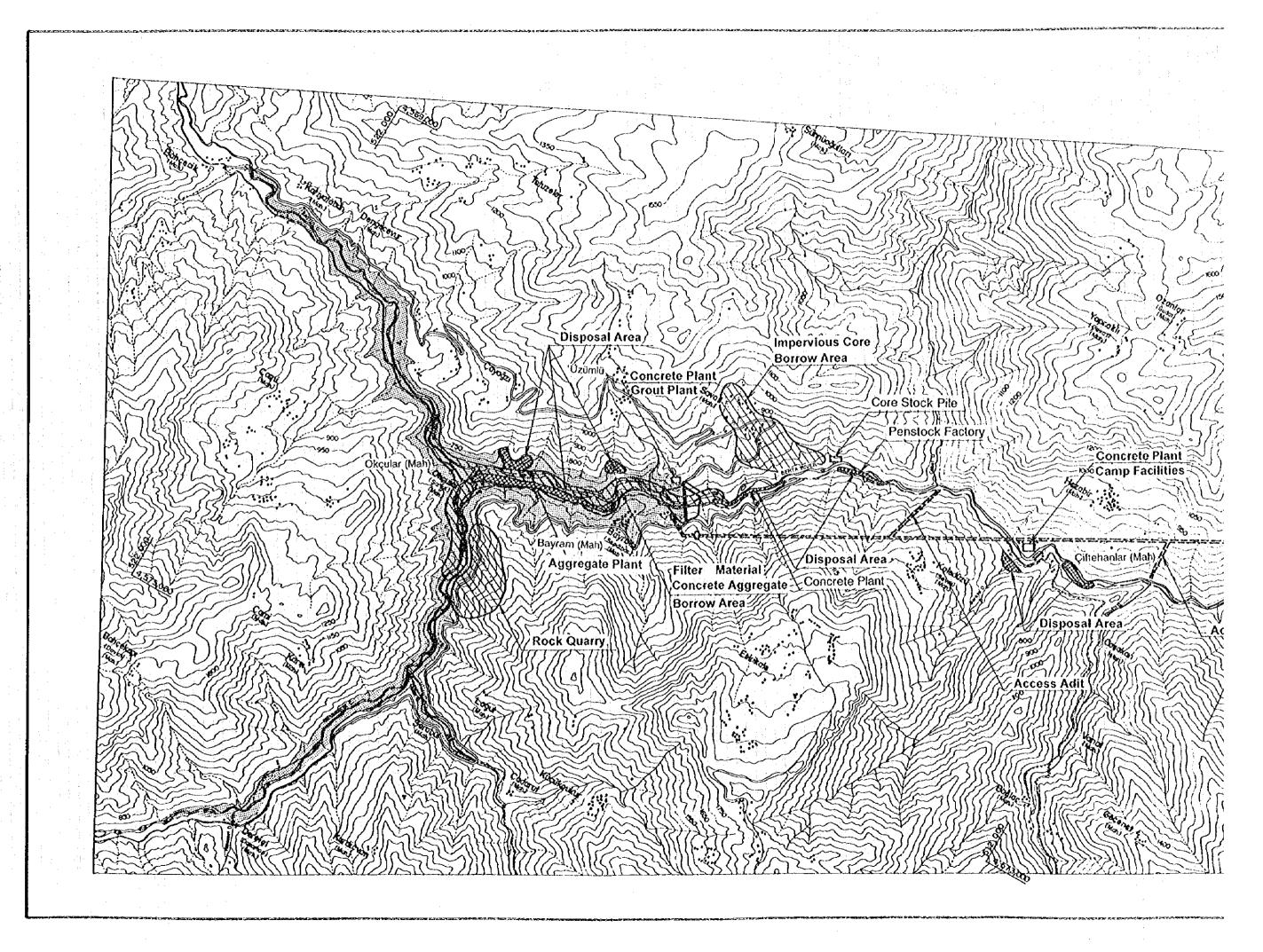
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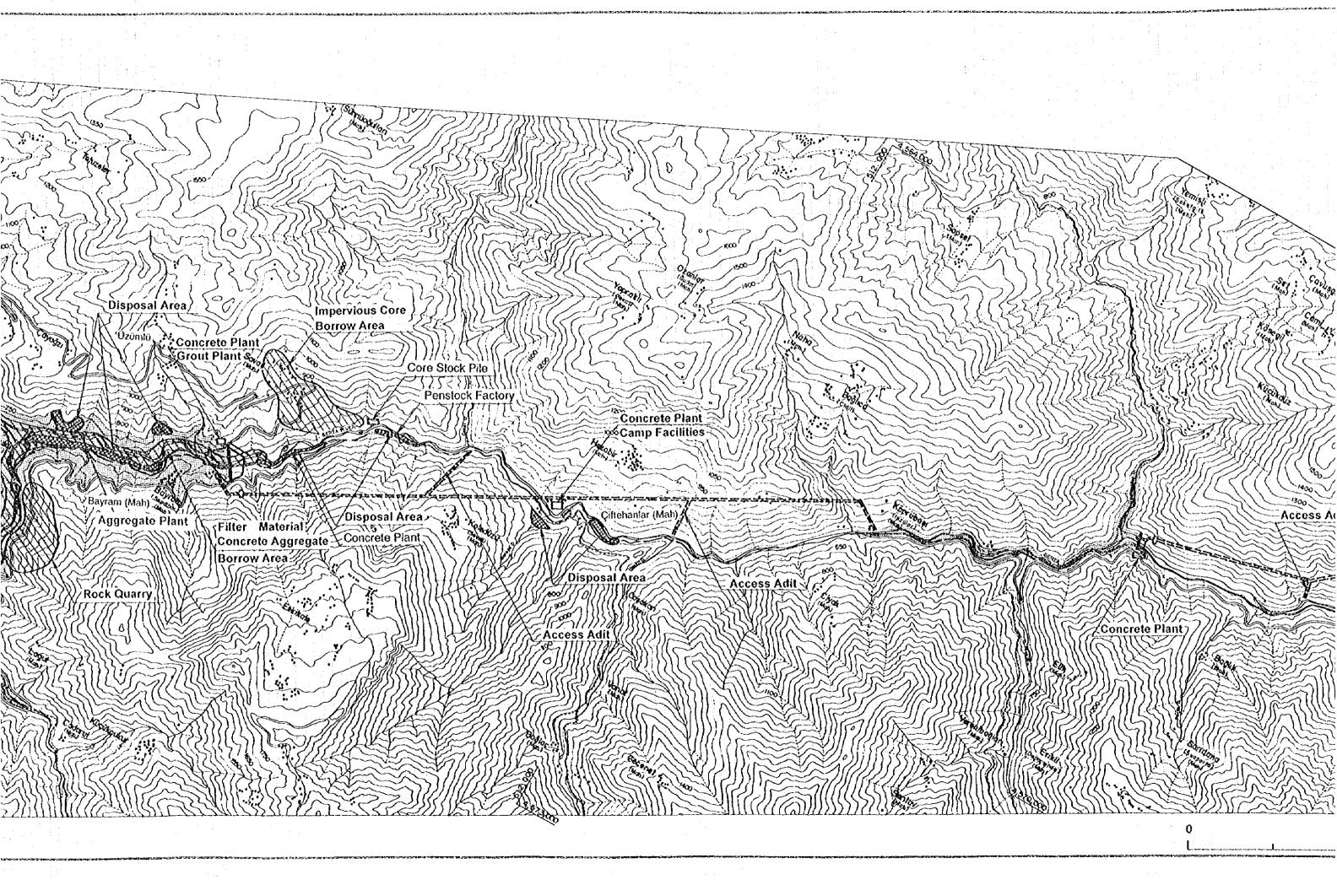
mortar injection work, the work adits are to be plugged. In order to begin impoundment of water in the reservoir, installation of the discharge valve to be provided in the diversion tunnel is to be carried out, and plugging of the diversion tunnel is to be completed.

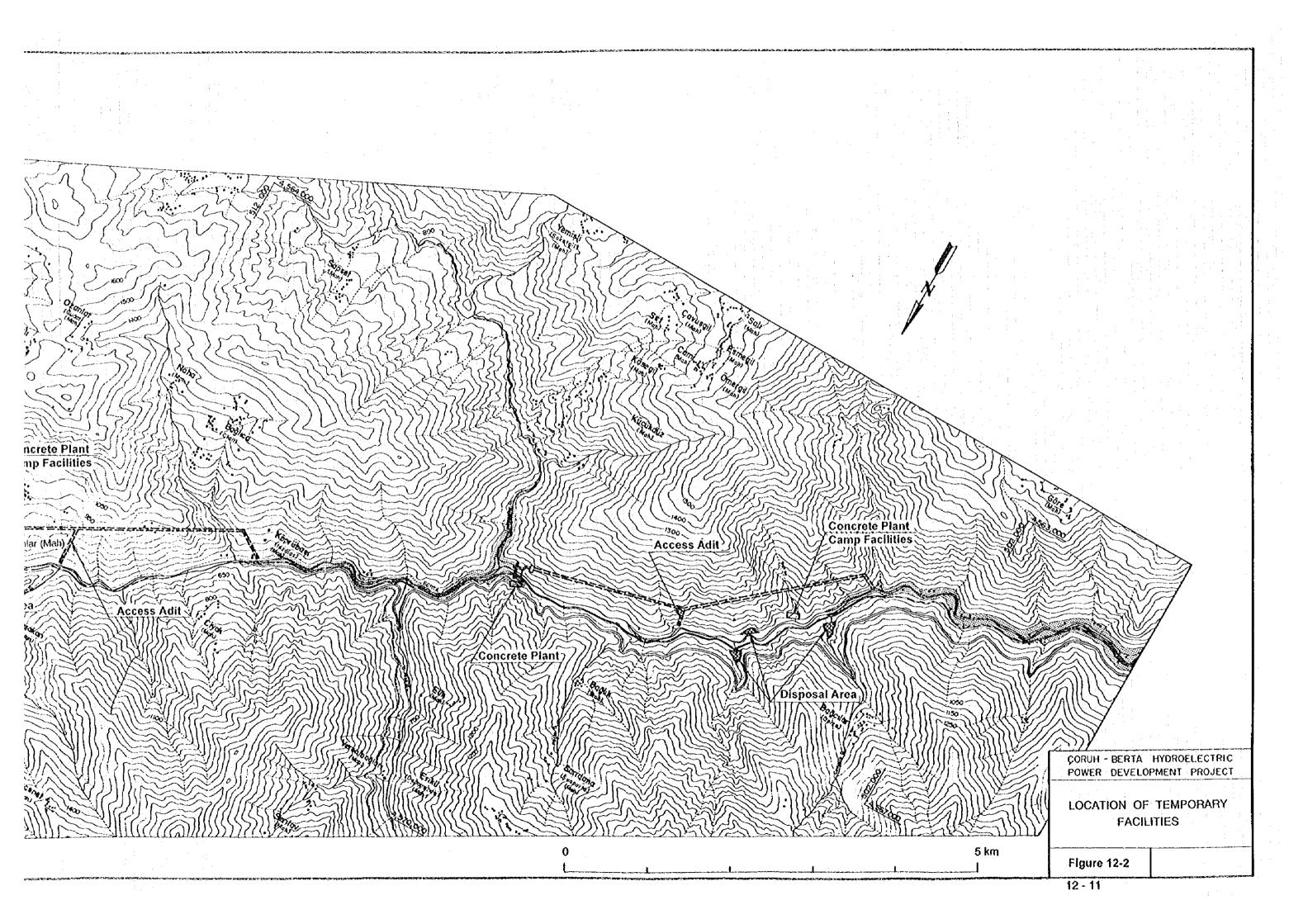
At the powerhouse and outdoor switchyard, installations of the turbine, generator, transformer equipment, are to be continued in aiming for start of operation. After completion of installation, dry tests and wet tests are to be conducted, and commercial operation is to be commenced at the end of the year. Construction of the transmission line is to be finished by the time of starting wet tests.

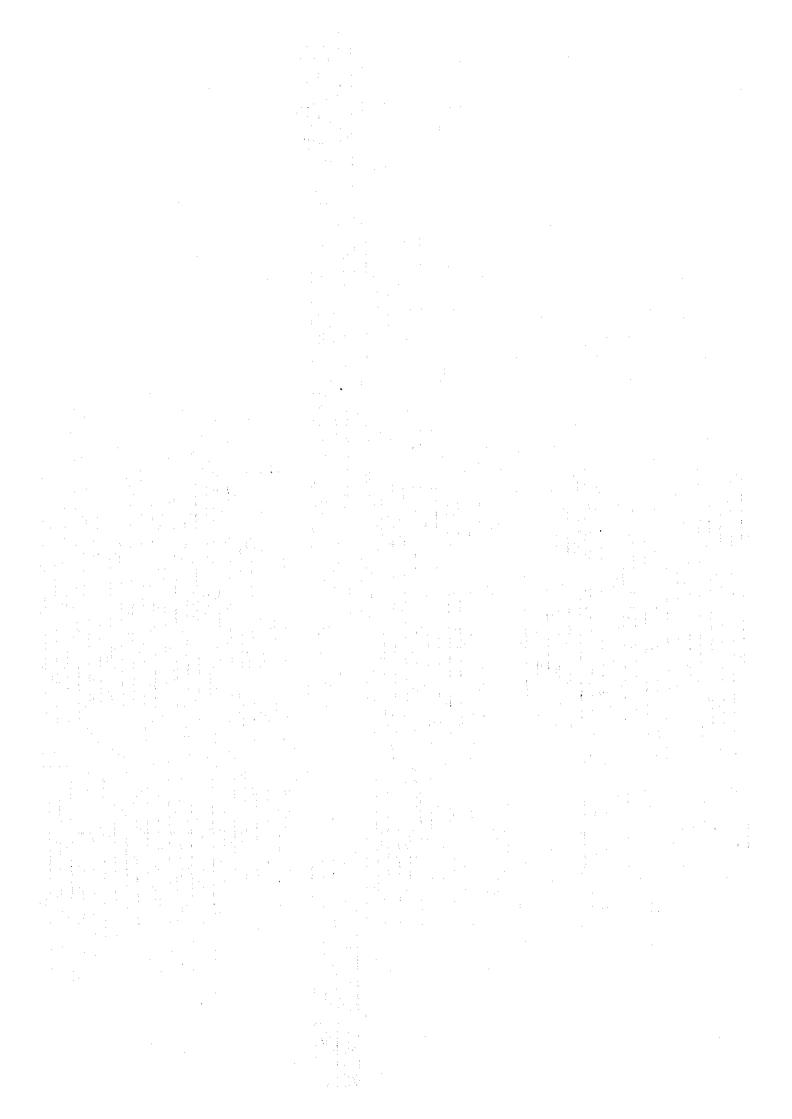
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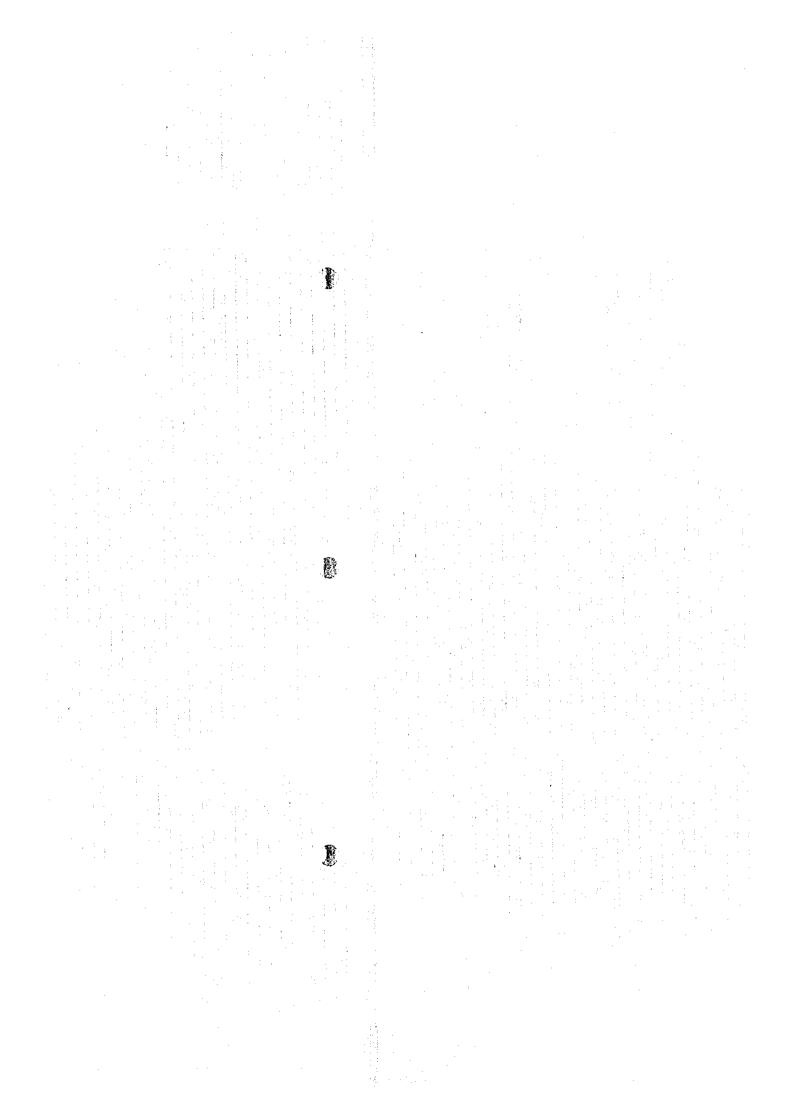












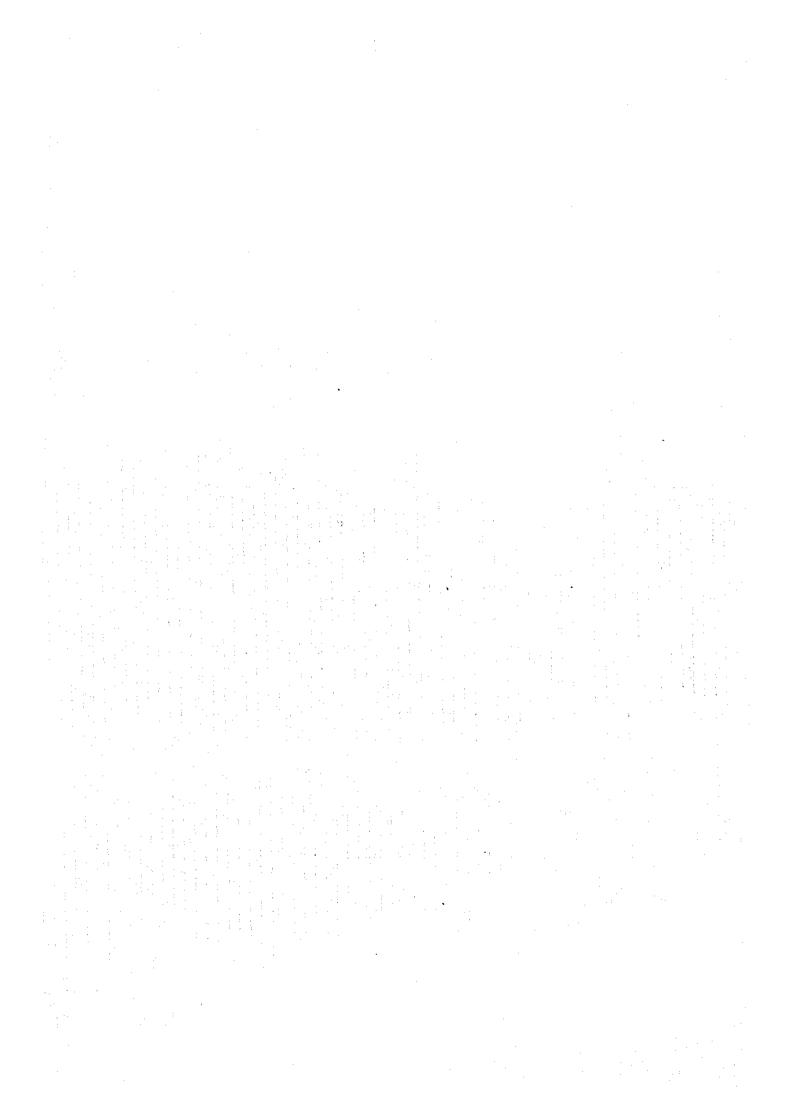


Figure 12-3 Construction Schedule of Bayram Project

# (2) Bağlık Project

The outline of the project and quantities of civil works are as given in Summary and Table 12-2, respectively.

The time schedule of construction work for the Bağlık project was studied taking into consideration construction scale, construction methods, etc., and as a result, it was determined that construction period of approximately 5 years would be required including preparations such as temporary facilities.

The layout plan for temporary facilities and work schedule for construction are shown in Figure 12-2 and Figure 12-4, respectively.

Table 12-2 Main Civil Works of Bağlık Project

Item	Description	Amount	of Works
Dam	Type: Concrete Gravity		· · · · · · · · · · · · · · · · · · ·
		Ex. In open	147 x 10 <sup>3</sup> m <sup>3</sup>
Parameter Company		Concrete	195 x 10 <sup>3</sup> m <sup>3</sup>
	Height: 74 m		
Spillway	Type:Center Overflow with (	<b>3ates</b>	
	Gate: 2 x 14.0 B x 11.0 H	Ex. In open	21,000 m <sup>3</sup>
		Concrete	9,600 m <sup>3</sup>
		Gate	2 sets
Intake	Type: Attached to	Concrete	500 m <sup>3</sup>
	Dam body	Gate	1 set
Penstock	Type: Steel Embedded		
	D: 3.6~3.0 m	Tunnel Ex.	3,000 m <sup>3</sup>
	L: 213 m	Filling Conc.	1,300 m <sup>3</sup>
		Steel	350 t
Power house	Type: Underground		
	B: 21.0 m	Cavern Ex.	33,000 m <sup>3</sup>
	H: 41.5 m	Concrete	10,500 m <sup>3</sup>
	L: 50.0 m	Gate	1 set
Tailrace Tunnel	Type: Horseshoe Non Pres	ssure	
TORROW TORROW	D: 4.9 m	Tunnel Ex.	141,000 m <sup>3</sup>
	L: 4,454 m	Lining Conc.	15,100 m <sup>°</sup>
		Gate	1 set

The critical path in the construction schedule of this project is the powerhouse work. The construction program and the construction schedule will be described below.

### First Year:

For smooth execution of construction work, it is indispensable to secure land necessary for various structure works by such measures as relocating part of National Highway so that traffic of vehicles in general will not be obstructed at the stretch of the highway from the end of the backwater of Deriner Reservoir to the surroundings of Bayram Dam, and constructing access roads as necessary for dam and powerhouse works by means of preparatory works before starting the construction work proper. Simultaneously with start of construction, materials procurement is to be done, the offices and quarters of the owner and contractor, materials yard, etc. are to be constructed, and site development and apparatus installation for temporary facilities such as the machinery repair factory, concrete plant, aggregate plant, etc., are to be started.

### Second Year:

Care of river for dam construction is to be done by partial river closing method with part of the river partitioned off surrounded by a retaining wall or other means and foundation excavation started at that part.

Placement of dam concrete is to be started by the cable crane method, but prior to that, concrete placement facilities are to be provided around the crest of the dam at the right and left banks.

Excavation of the river-bed portion of the dam is to be completed, and foundation treatment grouting is to be started. Fundamentally, curtain grouting is to be done from the dam inspection gallery at the same time as dam concrete placement works after excavation of the foundation. Grouting of the wings at right and left banks is to be done providing separate grouting tunnels.

For works such as the cable tunnel to serve as a work adit for the powerhouse (arch portion work adit), powerhouse access tunnel (midheight work adit), tailrace work adit, etc., excavation is to be started as soon as temporary facilities have been completed.

In powerhouse excavation, after excavation of the cable tunnel, excavation for enlargement of the arch section is to be done and muck is to be hauled out from the tunnel by truck.

### Third Year:

Vertical shaft excavation for the penstock at the back face of the dam is to be started by the raise borer method. As the method of mucking out, after pilot reaming excavation, the reaming holes are to be used for enlargement, the enlargement muck dropped down the vertical shaft and hauled out by the penstock work adit which has been connected to the shafts beforehand.

At the powerhouse, arch concrete is to be placed immediately after excavation of the arch. After completion of concrete placement, bench cutting is to be started for excavation of the lower portion of the powerhouse. In bench cutting, a glory hole is to be provided and muck dropped down, and after working from the midheight work adit making use of the powerhouse access tunnel, muck is to be hauled out by truck.

Placement of concrete is to be started as excavation progresses. Liners of the draft tube are to be installed while foundation concrete is being placed.

Excavation of the tailrace tunnel is to be continued from maximum of four excavation faces using one work adit and after completion of excavation, concrete lining work is to be started.

### Fourth Year:

Placement of dam concrete is to be completed. Placement is to be done carrying out pipe cooling to prevent temperature rise. Installation of penstock and placement of backfill concrete in shaft part of penstock, tower crane would be used for these works. For the intake, concrete at the inlet is to be placed. Side wall and slab concrete of the powerhouse are to be more or less completed, and after installing crane girders, an overhead traveling crane is to be installed. When the crane has been installed, installation of electromechanical equipment such as the turbine and generator would be started.

Lining concrete placed, and construction of the outdoor transmission line is to be started.

Fifth Year:

Gate installation at the spillway and intake are to be done. Concrete lining work at the tailrace tunnel is to be completed, and after mortar injection, the work adit is to be plugged.

In order to begin the impoundment of water in the reservoir, diversion channel in dam body for diversion is to be plugged.

At the powerhouse, installations of the turbine, generator and transformer equipment are to be continued in aiming for start of operation. After completion of installation, dry tests and wet tests are to be conducted, and commercial operation is to be commenced at the end of the year. Construction of the transmission line is to be finished by the time of starting wet tests.

Fig. 147 10 m²   Fig.	them.	Ouantity		1st		2nd			3rd			- 4th			£5		7
Section   Content   Cont			1	1	4	2	3	-	2	3 4	1		4	-		က	,
Ex. 1.46 x 10° m   Ex. 1.46 x	Preparatory Works					# <b>A</b>	rang myer flor	*	**					Commence			ξÄ
Signature   Sign								 				1		-	1	1	Ţ
Ext. 137 m/	Nversion																37
Ex. 21,000 m²   Conc. 560 m²   Conc. 1.300 m²   Conc. 1.050 m²		Ex: 147 x 10 <sup>2</sup> m <sup>3</sup> Dam Conc. : 195 x 10 <sup>3</sup> m <sup>3</sup> Grouting : 18,100 m				ă	8 0 0									:	
Ext. 3.000 m²		Ex: 21,000 m² Conc: 9,600 m³															
Ex: 3,000 m²  Conc. 1,300 m²  Conc. 10,500 m²  Conc. 10,5	ntake	Cone: 500 m²				: 1					. <u> </u>	8					
Cable Turnel L: 563 m   Cancer Turnel L: 563 m   Cancer Turnel L: 258 m   Cancer Turnel L: 258 m   Cancer 33.00 m²   C		Ex: 3,000 m² Conc: 1,300 m³ L:213 m					ই				: : : : : :	8					
Di.4.90 m Li.4,454 m		Access Tunnel L:563 m Cable Tunnel L:268 m Ex: 33,000 m³ Conc:10,500 m³						7		ı i	; ;				1		
Dit 4,30 m 1: 4,454 m   Donc   Donc	Surge Chamber											2					
Spilway Gate : 2 Units Intake Gate : 1 Unit Draft Gate : 1 Unit Talirace Gate : 1 Unit Penstock : 350 t Indiana Cane Installation	Tairace Tunnel	D:4,90 m L:4,454 m					 ப				O C						
Vanutactures Crear	Hydraulic Equipment	Spilway Gate : 2.Units Intrake Gate : 1.Unit Draft Gate : 1.Unit Tailrace Gate : 1.Unit Perstock : 350 t															
Transmission Line	Electro-Mechanical Equip						Vanuacum			ă[		Š		Letton.		oroper We	Λ
	fransmission Line																

Figure 12-4 Construction Schedule of Bağlık Project

### 12.2 Construction Cost

The construction cost of the project was estimated carrying out studies based on design, construction methods and construction materials, etc., and commensurate with the engineering level as of the present time, taking into consideration the hydrological, geological, regional conditions of the project site, and project scale as well. The construction cost is to be calculated based on the price in January 1996. 1 US\$ = 61,000 TL.

# 12.2.1 Fundamental Items

(1) Items for Estimation of Construction Cost

(a) Civil Works

Care of river : Diversion tunnel, upstream and downstream

cofferdams

Dam proper and foundation treatment

(includes, spillway and outlet facilities)

Waterway Intake, penstock, surge chamber, tailrace and

outlet

Powerhouse and switchyard : Civil and architectural works

Access road : Powerhouse access tunnel and others

Relocated road :

(b) Hydraulic equipment : Gates, penstock, etc.

(c) Electromechanical equipment: Turbine, generator, transformer, etc.

(d) Camp facilities : Camp facility, telecommunication facility and

electric power facility for construction

(e) Administrative expense : Expenses required for engineering guidance

concerning project, coordination and

management of project, etc.

- (f) Compensation cost
- Compensation for land, buildings, etc. in water impoundment area
- (g) Transmission line
- (h) Interest during construction
- (i) Contingency

- (2) Criteria of Cost Estimate
- (a) Civil Works

Unit construction costs were determined with laborers' wages and prices of materials as bases upon comparison studies with unit construction costs of hydroelectric power stations in Turkey existing, under construction, and at sites for which feasibility studies have been completed, and referring to unit construction costs at similar sites in Japan.

# (i) Unit Labor and Material Cost

As unit costs of labor and material, the primary unit costs listed in 1996 YILINA AIT AND INŞAAT BIRIM FİYATLARINA ESAS İŞÇİLİK-ARAÇ VE GEREÇ RAYİÇ LISTELERI were used. The main unit costs are given in Table 12-3 and Table 12-4 and labor cost in civil works was calculated in local currency.

Table 12-3 Labor Cost

ltem	Labor Cost TL/day
Foreman	919,800
Operator A	729,900
Operator B	512,900
Mechanic	641,100
Labor	419,500
Carpenter	612,600
Electrician	612,600

Table 12-4 Construction Material Cost

Item	Unit	Cost TL
Cement (bag)	t	2,000,000
Cement (bulk)	t	1,920,000
Gasoline	kg	42,500
Diesel oil	kg	26,300
Dynamite	kg	198,000
Reinforcement	t	15,587,000

Costs related to transportation of cement, reinforcing bars, and structural steel are to be calculated referring to the calculation method for transportation costs in DSI BIRIM FIYAT CETVELI 1996 and these construction material can be obtained domestically, so costs were calculated in local currency.

# (II) Construction Machinery

The main construction machines such as dump trucks, bulldozers, loading machines, concrete pumps, aggregate plant, batching plant, cranes, boring machines, and grouting machines are all considered will be imported and machinery costs are calculated based on CIF Hopa Port prices, and their costs were calculated in foreign currency.

# (III) Relocated Road and Access Road

The construction costs of relocated roads and access roads are calculated based on unit construction costs of the Highway Department, and their costs were calculated in local currency.

### (b) Hydraulic Equipment

Penstock pipes, spillway gates, discharge facilities, intake gates, outlet gates, etc. are considered as being fabricated in Turkey, and almost equipments can be obtained domestically, so costs were calculated in local currency.

# (c) Electromechanical Equipment

Electromechanical equipment such as turbines, generators, and transformers are to be imported from overseas. Transportation costs to the powerhouse site, installation costs, insurance, etc. are to be included in these costs. Electrical equipments are to be all considered as imported ones and their costs were calculated in foreign currency. But, the costs for inland transportation, installation and insurance were all in local currency.

# (d) Camp Facilities

Camp Facilities include the facility for camp, telecommunication and electric power for construction.

Cost for camp facility is for offices and accommodation, telecommunication facility for wireless communication and electric power facility for transformer and its operation and maintenance for construction works. And these costs were all calculated in local currency.

But as to aggregate plant, concrete plant, roads and bridges for construction and facilities of air and water supply for construction, they are all to be included in civil work unit price as temporary equipment costs.

### (e) Administrative Cost

Administrative cost including engineering fee of the project is to be 10% of the construction cost.

## (f) Compensation Cost

Compensation cost such as for land acquisition was calculated based on data furnished by EIE and its cost was calculated in local currency.

The cost of relocated roads was included separately in civil works construction cost in local currency.

# (g) Transmission Line Construction Cost

Transmission line construction cost was calculated referring to unit cost of TEAŞ in local currency.

# (h) Import Duties and Various Taxes

Custom duties on electromechanical equipment such as turbines and generators to be imported was not considered.

# (i) Contingency Cost

Contingency cost was added for each construction cost, 15% contingency cost for civil work, 10% for hydraulic equipment and 5% electro mechanical equipment including transmission line.

# (j) Interest during Construction

Interest ratio 9.5% was applied for local and foreign currency, respectively. And the influence of inflation was not considered for the construction cost.

## (k) Construction Cost

Table 12-5, 6 show fund requirement of each year of project and Table 12-7~12 show construction cost of civil works and hydraulic equipment.

Table 12-5 Fund Requirement of Each Year of Bayram Project

Locel Locel Currency Relocation Road 11.65 Camp Facilities 80 Civil Works Dam Care of River (conter dam) 51,55 Diversion Tunnel 1,70	11 1	oreign	Tore:	ocal	Foreign	Local	The second		Through a	2		-	
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ties  5  2  2  2  2  Tunnel	ပည	UTBLCV	11.655	Currency 2,331	Currency	Currency 2.331	Currency	2.331	Currency		Currency	2,331	Currency
ties 5: 25 ver(corter dam) Tunnel		· .									-		
5. ver(coffer dam) Tunnel	800	0	80	8	0	0	•	0	0	0	O	0	0
2- ver(coffer dam) Tunnel	21.567	31,546	83,113	0	0	9,263	4,572	17,515	10,211	16,003	9,484	8.786	7,279
of River(coffer dam)	24.333	22.048	47 281	0	0	2,433	2.205	7,300	6.884		6.884	7,300	5,884
	35	528	.082	0		•	0	3	528		0	0	
	7	/50	2.421	Ö	0	30/:-	733	0	0	0	o	0	o
Outlet works	8	202	6,0	0	0	362	147	0	0	362	147	0	•
	5.617	506	7.523	٥	0	1,685	572	2,800	88	113	18	0	•
	Ş	942	8	o	o	187	8	52	8		171	٥	•
Intake adit	8	12	ā	0	0	0	0	8	8	0	0	0	Ĭ
Penstock	8	8	428	0	0	c	0	5		165	4	0	0
Penstock adit	8	13	118	0	0	0	•	8	522		Ó	Ö	•
	8	310	2.245	0	0	0	Ö	137	8	220	56	193	32
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	1	123	808	0	0	222	6	0	0	222	5	0	Ū
Designate tunnel	55	4	197		0	0	0	155	4	0	o	0	0
Surge chember	452	131	283	O	0	0	0	•	•	452	131	o	٥
Surge chamber access tunnel	8	4	25	0	0	0	0	•	0		4	0	0
	11.637	3 320	14.965	0	0	30	8	4.655	1.83.1	4.655	133.	3	33
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		* .											
Hydraulic Equipment	3,607	30,1	4.730	0	0	0	•		•	948	516	1,848	516
			0		-		•		Ė			Í	X60 04
	3	909	200,0	>	<b>5</b>	•	•	3		<b>&gt;</b>	<b>&gt;</b>		2
Equipment in	65.	c	41.		•	·	C			0/3	c	570	a
•	}	· •	-				)	· :			- : -		:
Construction Cost	70,942	44,385	115,327	3,131	0	11,594	4,572	20 159	11,982	20,752	10,000	15,306	17,83
			1	1	•								•
Contingency	5. 2.	5,426	35,580	470	o	7.30	3	2,992	1,620	2.00	474	3	2 2
Provinceding and	801.8	4.981	13.089	8	0	1,333	226	2,315	1360	2,372	1.147	17.27	948
**************************************		<u> </u>					1		:				•
	2,242	ō	2,242	2,242	•	•	•	•	•	0	•	0	:
Project Cost	91,426	54,792	146,218	6,203	0	14,067	'n	25,486	14,962	26,087	12,621	19,002	21,424
		-											
Interest during Construction	18,100	7,742	25,842	8	0	1,280	272	3,192	1,260	25.041	2,570	7.686	3,637
					· · ·								. :
investment cost (×10° US\$) 10	109,525	62,534	172,060	6,498	0	15,963	6,059	28,658	16,222	31,728	15,191	26,688	25,061
The second country of the Table of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of the Country of t	6 681 044	3.814.500 10.405.634	405,634	306.363	0	973.107	369,593	1.748.120	989.569	1,935,382	926.675	1,627,979	1.528.694

Table 12-6 Fund Requirement of Each Year of Bağlık Project

		157				1							Sec. 10 %
			T	П	100	- }		5	3	- 1	Π	ş	3
<b>1160</b>	Currency	Currency	R C	Currency	Currency	Currency	Currency	Currency	Foreign	Local	Foreign	Local	Foreign
Relocation Road		ō	6,759	1.85.	0	1.35	0		0			386,1	0
Camp Facilities	8	0	800	800	0	•	0	· 0	0	0	0	0	o
Civil Works	10.284	000	36 OB	(		7		1					- 1
Dem	9,002	3,321	0.983	0	0		000,1	0 0	3.5	99 C	2	8 9	A <
Spillway	8	178	780	o	0	000	-	}		-		•	<b>o</b> c
Intake	***		\$	0	•	30		0	0	> 3	> <b>c</b>	<b>&gt;</b> C	o c
Penstock	8	87	256	0	0		0	8	8	2	. 8	•	ò
Penstock adit	8	ĸ	118	0	0	8	ន	0	0	•		0	• 0
Powerhouse	2,225	373	2,598	0	0	222	37	88	40	8	45	222	37
Access funnel	,259	357	1,616	0	0	1,259		•	o	0	Ó	0	٥
Cable tunnel	8	8	471	٥	0	388	. : . <u></u>	0	0	•	Ö	0	0
Drainage tunnel	172	47	270	0	0	172	4	ō	0	0	0	0	ō
Surge chamber	3	128	272	0	0	•	Ó	8	8	**	103	0	o
Surge chamber access tunnel	8	4	25	0	0	O	0	4	1	16	4	٥	٥
Tailrace funnel, outlet	9,906	2,008	8,914	0	0	1,36,1	402	2,762	803	2,762	\$	Ó	0
Tailrace adit	8	8	8	0	0	98	85	0	0	0		0	0
Hydraulic Forgoment	2487	Ş	Ş		•	•	•						
	<u> </u>	}	7	•	•	<b>&gt;</b>	5	5	•	482	5	8	X.
Electro-Mechanical	2,108	29.11	14,051	٥	٥	0	0	316	1 792	0	0	1,792	10,151
Equipment	4	•								:		; 	
	8	•	32,4	0	0	0	0	0	0	2.12	٥	2,125	0
Construction Cost	35,648	18,777	34,465	2,151	0	8,416	2,566	8,176	4,120	10,456	940	6,489	10,243
Contingency	4,593	616,	6,200	325	0	1,262	285	1,195	3	1.281	272	532	510
Engineering and	4,028	2.030	6,067	247	0	88	**	786	ģ	1,174	2	702	1,076
Administration Cost Land Acquisition	88	0	8	8	0	0	0	0	•		0	•	o
Project Cost	44 907	20.63.0	1	6		4							· <del></del>
	} 	ž	3	3	> :	0.5	047.0	905'01	200'6	12911	2,323	7,788	11,838
Interest during Construction	\$15.0	2,609	12,124	35	•	821	2	1,816	£	2,919	8	3,801	1,012
Investment cost (×10° US\$)	54,422	25,041	79,463	3,477		11,467	3,400	12,124	5,573	15,630	3,219	11,524	12,850
Investment cost (x.10° TL.)	3,319,751	1,527,517	4,847,268	212,007	0	699,459	207,419	739,572	330,938	965,650	196,336	702.974	783.823

1

1

Table 12-7 Construction Cost of Civil Works (Summary) Bayram Project

NUMBER	DESCRIPTION		COST (UNIT:TL)		<b>Ο</b>	COST(UNIT:US\$	_
		LC	FC	TOTAL	IC	) L	TOTAL
	DAM	1,484,309,079,225	505,120,608,668,1	2,884,118,120,730	24,332,935	22,947,689	47,280,625
7	COFFER DAM	33,782,514,310	32,212,199,545	65,994,713,855	553,811	528,069	1,081,880
6.5	DIVERSION TUNNEL	107,609,117,595	40,078,666,215	147,687,783,810	1,764,084	657,027	2,421,112
4	OUTLET WORKS	44,106,495,300	17,972,718,225	62,079,213,525	723,057	294,635	1,017,693
S	SPILLWAY	342,655,727,610	116,227,333,320	458,883,060,930	5,617,307	1,905,367	7,522,674
v	INTAKE	38,019,663,675	20,849,043,600	58,868,707,275	623,275	341,789	965,061
.9	INTAKE ADIT	5,810,475,090	1,634,306,205	7,444,781,295	95,253	26,791	122,044
~	PENSTOCK	20,113,863,670	5,964,939,290	26,078,802,960	329,735	91,786	427,521
-	PENSTOCK ADIT	5,658,932,790	1,542,035,775	7,200,968,565	92,769	25,279	118,048
œ	POWER HOUSE	117,673,204,425	19,299,052,815	136,972,257,240	1,929,069	316,380	2,245,447
6	ACCESS TUNNEL	066'666'688'666	27,732,279,330	127,072,279,320	1,628,524	454,628	2,083,152
្ព	CABLE TUNNEL	27,057,064,230	7,497,769,860	34,554,834,090	443,559	122,914	566,473
	DRAINAGE TUNNEL	9,482,756,220	2,556,389,220	12,039,145,440	155,456	41,908	197,363
12	SURGE CHAMBER	27,563,782,995	8,021,154,435	35,584,937,430	451,865	131,495	583,359
133	SURGE CHAMBER ACCESS TUNNEL	1,220,933,910	268,766,610	1,489,700,520	20,015	4,406	24,421
41	TAILRACE TUNNEL OUTLET	709,845,750,075	203,044,994,670	912,890,744,745	11,636,816	3,328,606	14,965,421
14.	TAILRACE ADIT	63,414,239,700	17,742,279,135	81,156,518,835	1,039,577	290,857	1,330,435
15	SWITCH YARD	7,924,880,880	1,870,926,120	9,795,807,000	129,916	30,671	160,587
┢		3,145,588,481,690	1.924.323.895.875	5 069 912 377 565	51 567 023	31 526 207	83.113.316

Table 12-8 Construction Cost of Civil Works (Summary) Bağlık Project

REMUN	DESCRIPTION		COST(UNIT:IL)	3	S	COST(UNIT:US\$)	<b>\</b>
		IC	DA C	TOIAL	JI .	FC	TOTAL
н	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	406,378,777,980	202,610,485,875	608,989,263,855	876'199'9	3,321,484	9,983,431
2	SPIILWAY	36,718,135,650	10,871,219,310	47,589,354,960	601,937	178,217	780,153
٣	INTAKE	2,053,852,920	370,055,280	2,423,908,200	33,669	6,067	39,736
4	PENSTOCK	12,141,843,210	3,567,149,460	15,708,992,670	199,046	58,478	257,524
. 3	PENSTOCK ADIT	5, 658, 932, 790	1,542,035,775	7,200,968,565	92,769	25,279	118,048
S	POWERHOUSE	135,705,591,630	22,747,242,210	158,452,833,840	2,224,683	372,906	2,597,588
9	ACCESS TUNNEL	76,796,473,380	21,763,146,900	98,559,620,280	1,258,960	356,772	1,615,732
_	CABLE TUNNEL	22,248,045,050	6,483,933,390	28,731,978,440	364,723	106,293	471,016
8	DRAINAGE TUNNEL	10,504,968,600	2,873,001,180	13,377,969,780	172,214	860,72	219,311
6	SURGE CHAMBER	27,030,233,685	7,833,347,025	34,863,580,710	443,119	128,416	571,534
01	SURGE CHAMBER ACCESS TUNNEL	1,220,933,910	268,766,610	1,489,700,520	20,015	905'5	24,421
11	TAILRACE TUNNEL.OUTLET	421,255,005,360	122,487,394,575	543,742,399,935	6,905,820	2,007,992	8,913,810
11.	TAILRACE TUNNEL ADIT	18,637,352,265	5,195,563,065	23,832,915,330	305,530	85,173	390,703
	TOTAL	1,176,350,146,430	408,613,340,655	1,584,963,487,085	19,284,433	185,869,6	25,983,007

Table 12-9 Construction Cost of Civil Works Bayram Project (1)

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Taul	F1777	CHETTE CITE NOT THE	d TIMI	PRICECUNITAL	Truss)	CO	COST (UNIT: US\$)	-		COST(UNIT:IL)	
L L L	1			PORPIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	1					-					
	,	0.0		AC 1	75 6	587, 280	643.560	1.224.840	35,458,080,000	39,257,160,000	74,715,240,000
Riverbed gravel excavation	2	200,816	71.7	77.7	35.5	202	54 808	104.312	3.019.744.000	3.343,288,000	6,363,032,000
Common excavation	Ę	44,200	77.7	47.1	2.00	200,000	730 700	080 681	48 77 513 000	23.445.716.000	72,217,229,000
Rock excavation	Ę	181,300	4.41	7:17	0.0	550,887	200, 200	50040044	COO ACA OCO L	000 081 000	2,927,756,000
Grout trench excavation	E.	5,200	6.08	3.15	9.23	31,616	16,380	06619	000,016,036,1	000 400 500 5	12 000 235 000
Grout tunnel excavation	. B.3	5,500	22.10	16.47	38.57	121,550	90,585	212,135	7,414,550,000	5,525,685,000!	72,940,233,000
Embanyment impervious core	S.	867,300	2.20	3.96	6.16	1,908,060	3,434,508	5,342,568	116,391,660,000	209,504,988,000	325,896,648,000
Embankment fine filter	E	269,700	1.60	2.93	4.53	431,520	790,221	1,221,741	26,322,720,000	48,203,481,000	74,526,201,000
Embankment coarse filter	E	531,400	2.72	2.76	5.48	1,445,408	1,466,664	2,912,072	88,169,888,000	89,466,504,000	177,636,392,000
Tenhaniment mores.	7	4,160,800	3.27	2.68	5.95	13,605,816	11,150,944	24,756,760	829,954,776,000	680, 207, 584, 000	1,510,162,360,000
This state of the test	7	136 100	4.18	5.01	9.19	568,898	198,189	1,250,759	34,702,778,000	41,593,521,000	76,296,299,000
Wester Court to Arthur	ĩ	006 69	1.07	2,15	3.22	74,793	150,285	225,078	4,562,373,000	9,167,385,000	13,729,758,000
Crown on land concrete	2	4.480	14.60	86.6	24.58	65,408	44,710	110,118	3,989,888,000	2,727,334,400	6,717,222,400
	E	2,690	16.79	10.10	26.89	45,165	27,169	72,334	2,755,071,100	1,657,309,000	4,412,380,100
West of the control of	1	500	36.61	7.19	43.80	18,305	3,595	21,900	1,116,605,000	219,295,000	1,335,900,000
TOTO TOTO TOTO TOTO	1	26.840	35.98	32.41	68.39	1,685,303	1,518,084	3,203,388	102,803,495,200	92,603,148,400	195,406,643,600
Section of Tables	E	7.850	35.98	32.41	68.39	282,443	254,419	536,862	17,229,023,000	15,519,528,500	32,748,551,500
Design opening	-	3.860	35.98	32.41	68.39	138,883	125,103	263,985	8,471,850,800	7,631,258,600	16,103,109,400
	ļ	069.9	143.86	192.38	336.24	674,703	902,262	1,576,966	41,156,907,400	55,037,994,200	96,194,901,600
CLOST TO CALL TO THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF T	,	007	143.86	192.38	336.24	57,544	76,952	134,496	3,510,184,000	4,694,072,000	8,204,256,000
Crowning consolitation	1	200	143.86		336.24	28,772	38,476	67,248	1,755,092,000	2,347,036,000	4,102,128,000
	1	360	563.00	00.0	563.00	202,680	o	202,680	12,363,480,000	o	12,363,480,000
Control Control	,	8,000	44.63	0.00	44.63	357,040	0	357,040	21,779,440,000	0	22,779,440,000
	, ,					1,158,711	1,092,747	2,251,458	70,681,384,725	66,657,573,405	137,338,958,130
Total	Ļ.					24,332,935	22,947,689	24,332,935 22,947,689 47,280,625	1,484,309,079,225	1,484,309,079,225 1,399,809,041,505	2,884,118,120,730

(2) COTTER DAM			:								
VOTTENATIO DITENT	TIME!	OUTANTITY	HIND	UNIT PRICE UNIT USS	US\$)	8	COST (UNIT: USS)	_		COST(UNITIEL)	
			LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOIL
	ļ										
	1	200	00 0	3 0.5	91.9	38.500	69.300	107,800	2,348,500,000	4,227,300,000	6,575,800,000
Embankment impervious core		200	21.7	2			١	-	000 35,	2 1 2 2 0 0 0 0 0 0	000 68 615 8
Smbankment filter	5	18,900	2.72	2.76	5.48	27,408	24,104	703,317	2,123,600,600	202122120110	
	É	72,100	3.27	2.68	5.95	235,767	193,228	428,995	14,381,787,000	11,786,908,000]	26,168,695,000
Cartain and a contains	F	3,390	35.98	32.41	68,39	121,972	109,870	231,842	7,440,304,200	6,702,063,900	14,142,368,100
Unitaring parameter		000	30 571		22 22		34.628	60.523	1,579,582,800	2,112,332,400	3,691,915,200
Grouting blanket	٥	Q.	30.5								400 027 500
Compart (bage)	ų	087	44.63	00.0	44.63	8,033	0	8,033	490,037,600	>	200000
1000	,					72,236	68,839	141,115	4,406,414,910	4,201,591,245	8,608,006,155
											: : : : : : : : : : : : : : : : : : : :
										200 000	330 511 700 33
Total						553,811	528,069	1,081,880	33,782,514,310	040,444,444,50	00010111110000

# Table 12-9 Construction Cost of Civil Works Bayram Project (2)

22 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   Marc	(3) DIVERSION TUNNEL							W		, , , , , , , , , , , , , , , , , , , ,	AH-WAINI, HOUSE	
Accordance   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   Decembe	Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Acc		:	T TOWN T	<b>1</b>	FOREIGN	TOTAL	٠ ا	FOREIGN	.   '	LOCAL	FOREIGN	TOTAL
Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accode   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accorda	Accordance												
According No. 1	Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Accordance   Acc	Common excevation	F		1.12	1.24	2.36	7,952	8,804	16,756	485,072,000	537,044,000	1,022,116,000
	December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December	Rock excavation	3	_	4-41	2.12	6.53	24,696	11,872	36,568	1,506,456,000	724,192,000	2,230,648,000
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December	Tunnel excavation	E		32.60	9.40	12.00	893,240	257,560	1,150,800	54,487,640,000	15,711,160,000	70,198,800,000
Libration concrete   Day   6,510   31,70   36,421   7,13   43,100   36,421   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,201   31,20	Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libration   Libr	Open concrete.	3		19.44	12.56	32.00	45,295	29,265	74,560	2,763,007,200	1,785,152,800	4,548,160,000
Librarian	Libertion n. 2,950 36.421 7.19 4.20 14.222 2.2566 27.355 67.792 2.2566 27.7250 0.725,000 7.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20,000 1.20	Tunnel lining concrete	£		31.70	19.30	51.00	206,367	125,643	332,010	12,588,387,000	7,664,223,000	20,252,610,000
Lange consolidation   R	Accordination   Mar.   400   35-98   33-41   68-39   14/329   125-365   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-17/356   6-1	Mortal injection	5		36.61	7.19	43.80	14,278	2,804	17,082	870,951,900	171,050,100	1,042,002,000
Maintain Composition   C.   A.   A.   A.   A.   A.   A.   A.	Ling currently R. C. 200 143.60 192.28 136.24 1.050 13.400 13.500 13.400 13.500 13.400 13.500 13.400 13.500 13.400 13.500 13.400 13.500 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600 13.600	Drilling curtain	É		35.98	32.41	68.39	14,392	12,964	27,356	877,912,000	730,804,000	1,668,716,000
Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidation   Consolidatio	1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0	Drilling consolidation	E	-	35.98	32.41	68.39	102,903	92,693	195,595	6,277,070,800	5,654,248,600	11,931,319,400
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Grouting curtain	ن د		143.86	192,38	336.24	5,754	7,695	13,450	351,018,400	469,407,200	820,425,600
Continuity   Eq. (2),230   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C.00   C	Continuity   E. C.   1.21   C.   1.22   C.   1.22   C.   1.22   C.   1.22   C.   1.22   C.   C.   C.   C.   C.   C.   C.	Grouting consolidation	'n	290	143.86	192,38	336.24	41,719	55,790	97,510	2,544,683,400	3,403,202,200	5,948,085,600
Chalk)   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Chalk   Cha	Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Cont	Rock bolt(2m)	X	L	23.78	6.22	30.00	76,809	20,091	006'96	4,685,373,400	1,225,526,600	5,910,900,000
Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Cont	Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Cont	Xeinforement	4		563.00	ं	563.00	123,860	0	123,860	7,555,460,000	0	7,555,460,000
1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1.5   1   1   1.5   1   1   1.5   1   1   1.5   1   1   1.5   1   1   1.5   1   1   1.5   1   1   1   1.5   1   1   1   1.5   1   1   1   1   1   1   1   1   1	1.5   1   1.5   1   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.5   1.	Cement (bulk)	4	3,310	41.56	ö	41.56	137,564	0	137,564	8,391,379,600	0	8,391,379,600
Title   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Continuaria   Contin	TITER   DATE   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED ACCOUNTY   COST (UNITED	Ослетв	3.0					69,254	31,847	101,101	4,224,505,895	1,942,655,715	6,167,161,610
1,764,084   S97,027   1,421,112   107,69,117,595   40,078,666,215   147,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   128,   12	1,764,004   657,027   2,421,112   10,769,117,595   40,078,666,215   147,		_		-								
Tile   Cost (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (DNIT)   COST (D	Tile   Cost (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)   COST (UNIT:TE)	Total	_		†			1,764,084	657,027	2,421,112	107,609,117,595	40,078,666,215	147,687,783,810
December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December   December	Diller Works   CONT_CONT_TY												
Secondarion   Mai   12,200   4.41   2.12   6.53   53,802   25,864   3,281,922,000   1,577,704,000   4,	axcavation         m3         12/200         4.41         2.023L         55.862         25.864         79.666         3.281,932,000         4.4         7.08EIGN         4.6         3.281,932,000         4.4         1.023L         6.53         55.862         25.864         79.666         3.281,932,000         1.777,704,000         4.7           axcavation         m3         5.900         32.66         9.40         42.00         192,340         55.466         247,800         1.037,7249,000         1.577,704,000         4.7           1 Lining concrete         m3         2.910         31.06         9.40         42.00         192,346         3.746,000         3.383,000         3.383,000         3.383,000         3.383,000         3.383,000         3.383,000         3.383,000         3.383,000         3.480,712,400         5.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000         3.222,000 <th< td=""><td>x 197700</td><td>ENG</td><td></td><td>TIND</td><td></td><td>USS)</td><td>Ö</td><td>SEU (TIND) ES</td><td></td><td></td><td>COST(UNIT:IL)</td><td></td></th<>	x 197700	ENG		TIND		USS)	Ö	SEU (TIND) ES			COST(UNIT:IL)	
accevation         m3         12/200         4.41         2.12         6.53         53/802         25/864         79/66         3/281/922/000         1/57/7044/000         4/40/2000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/7044/000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/2000         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200         1/57/704/200 <t< th=""><th>accenvation         m3         12,200         4.41         2.12         6.53         53,802         25,864         79,666         3,281,922,000         1,577,704,000         1,577,704,000         1,577,744           accenvation         m3         5,900         21.46         12.47         33.93         17,186         9.976         27,144         1,047,248,000         608,556,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000</th></t<> <th></th> <th></th> <th></th> <th></th> <th></th> <th>TOTAL</th> <th></th> <th>FOREIGN</th> <th></th> <th>LOCAL</th> <th>FOREIGN</th> <th>TOTAL</th>	accenvation         m3         12,200         4.41         2.12         6.53         53,802         25,864         79,666         3,281,922,000         1,577,704,000         1,577,704,000         1,577,744           accenvation         m3         5,900         21.46         12.47         33.93         17,186         9.976         27,144         1,047,248,000         608,556,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000						TOTAL		FOREIGN		LOCAL	FOREIGN	TOTAL
excevetion         m3         12,200         4.41         2.12         6.53         53,802         25,864         79,666         3,281,922,000         1,577,704,000         4,6           excevetion         m3         800         21.46         12,47         12,44         12,407,2249,000         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,700         15,7	axcevetion         m3         12,200         4.41         2.12         6.53         53,802         25,864         3.281,922,000         1,571,764,000         4,682,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,000         1,571,764,764,000         1,571,764,764,764,764,764,764,764,764,764,764						100						
excavation         m3         \$00         21.46         12.47         33.93         17,168         9,976         27,144         1,047,248,000         608,536,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,000         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,000         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15,300         15	excentation         m3         800         21.46         12.47         33.93         17,168         9,976         27,144         1,047,246,000         608,536,000         15           1 excentation         m3         5,900         32.60         940         42.00         192,346         55,460         247,800         15,835,060         5,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060         15,835,060	Rock excavation	뎚	ļ	4-42		6.53	53,802	25,864	79,666	3,281,922,000	1,577,704,000	4,859,626,000
1.   1.   1.   1.   1.   1.   1.   1.	1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.00000   1.00000   1.00000   1.00000   1.00000   1.00000   1.00000   1.00000   1.	Shaft excavation	1	ļ.,	21.46	12.	33.93	17,168	9,976	27,144	1,047,248,000	608,536,000	1,655,784,000
concrete         m3         2,910         19.44         12.56         32.00         56,570         36,550         93,120         3,450,794,400         2,229,525,600         57           1 lining concrete         m3         1,810         31.70         19.30         51.00         57,374         34,933         92,310         3,489,997,000         2,130,913,000         57,130,913,000         57,130,913,000         2,130,131,400         2,130,131,400         1,910,00         27,585         7,215         34,800         1,682,672,800         197,152,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,913,000         2,130,913,913,000         2,130,913,913,913,913,91	concrete         m3         2,910         19.44         12.56         32.00         56,570         36,550         93,120         3,450,794,400         2,729,525,600         5,710         11,110,110         31.70         13.20         3450,997,000         2,729,525,600         5,710         31,223         8,615         3,450,997,000         2,130,913,000         5,130,913,000         5,130         3,450,100         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000         2,130,913,000 <td></td> <td>E</td> <td>-</td> <td>32.60</td> <td></td> <td>42.00</td> <td>192,340</td> <td>55,460</td> <td>247,800</td> <td>11,732,740,000</td> <td>3,383,060,000</td> <td>15,115,800,000</td>		E	-	32.60		42.00	192,340	55,460	247,800	11,732,740,000	3,383,060,000	15,115,800,000
1 lining concrete         m3         1,810         31.70         19.30         57,377         34,933         92,310         3,499,997,000         2,130,913,000         5,000           Lining concrete         m3         320         16.79         10.10         26.89         5,373         3,232         8,605         327,740,800         197,135,000         5,000           Concrete         m3         3,060         16.29         30.00         27,518         3,123         8,605         440,127,200         2,000         27,525         34,800         1,184,082         1,927,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         2,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000         3,136,013,000	Lining concrete   m3   1,810   31.70   19.30   57,377   34,933   92,310   3,489,997,000   2,130,913,000   5, 2,130,913,000   5, 2,130,913,000   5, 2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913,000   2,130,913	Open concrete	5	L	19.44		32.00	56,570	36,550	93,120	3,450,794,400	2,229,525,600	5,680,320,000
lining concrete         m3         320         16.79         10.10         26.89         5,373         3,232         8,605         327,746,800         197,152,000         5,000         5,000         5,000         1,520,731,400         5,000         1,920,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         5,000         1,520,731,400         2,000         2,000         2,000         1,520,731,400         2,000         2,000         2,000         3,000         3,123,201         3,154,554,000         1,920,731,400         2,000         2,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,131,000         3,131,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,00	lining concrete         m3         320         16.79         10.10         26.89         5,373         3,232         8,605         327,740,800         197,152,000         500           concrete         m3         3,660         16.90         10.20         27,126         51,714         31,487         83,201         3,154,554,000         1,920,731,400         5,000           bolt(2m)         m3         3,060         16.90         27,285         17,215         34,800         1,624,6500         440,127,200         2,1           bolt(2m)         m3         200         35.86         32,41         68.39         14,322         1,245         87,60         446,642,000         17,12,000         440,127,120         2,1         440,121,120         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1         1,1 <t< td=""><td></td><td>m3</td><td></td><td>31.70</td><td>19.30</td><td>51,00</td><td>57,377</td><td>34,933</td><td>92,310</td><td>3,499,997,000</td><td>2,130,913,000</td><td>5,630,910,000</td></t<>		m3		31.70	19.30	51,00	57,377	34,933	92,310	3,499,997,000	2,130,913,000	5,630,910,000
concrete         m3         3,060         16.90         10.29         27.19         51,714         31,487         83,201         3,154,554,000         1,920,731,400         5,001 (20)           bolt(2m)         pc         1,160         23.78         6.22         30.00         27,585         7,215         34,800         1,682,672,800         440,127,200         2,200           1 injection         m         200         36.61         7.19         43.80         7,215         34,800         1,682,672,800         440,127,200         2,200           injection         m         400         35.98         32.41         68.39         14,382         12,356         46,642,000         790,804,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         1,400,000         2,400,000         1,400,000         2,400,000         1,400,000         2,400,000         2,400,000         2,400,000         2,400,000         2,400,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,200,000         2,2	concrete         m3         3/060         16,90         10,29         27,19         51,714         31,487         83,201         3,154,554,000         1,920,731,400         5,001           bolt(2m)         pc         1,160         23,78         6,22         30,00         27,585         7,215         34,800         1,682,672,800         440,127,200         2,00           l injection         m3         200         35.61         7,322         1,438         8,760         446,642,000         87,718,000         2,200           injection         m3         200         35.61         7,322         1,438         8,760         446,642,000         87,718,000         2,200           injection         m3         200         35.241         68.39         14,382         12,964         27,356         87,718,000         37,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000         3,718,000		£m.		16.79	10.10	26.89	5,373	3,232	8,605	327,740,800	197,152,000	524,892,800
bolt(2m)         pc         1,160         23.78         6.22         30.00         27,585         7,215         34,800         1,682,672,800         440,127,200         2,200           1 injection         m3         200         36.61         7,322         1,438         8,760         46,642,000         87,718,000         2,718,000           ing curtain         m         400         35.98         32.41         68.39         14,382         12,964         27,556         877,912,000         790,804,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         1,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000         2,718,000	bolt(2m)         pc         1,160         23.78         6,22         30.00         27,585         7,215         34,800         1,682,672,800         440,127,200         2,200           linjection         m3         200         36.61         7,322         1,438         8,760         446,642,000         87,718,000         1,718,000           Ang curtain         m         400         35.98         32.41         68.39         14,322         12,964         27,356         877,912,000         790,804,000         1,500,804,000         1,500,804,000         1,500,804,000         1,500,804,000         1,500,804,000         1,500,804,000         1,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,500,804,000         2,5	Plug concrete	m3		16.90	10.29	27.19	51,714	31,487	83,201	3,154,554,000	1,920,731,400	5,075,285,400
1 injection         m3         200         36.61         7.18         43.80         7,322         1,438         8,760         46,642,000         87,718,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138	1 injection         m3         200         36.61         7.18         43.80         7,322         1,438         8,760         46,642,000         87,718,000         1,138,000         1,438         8,764         27,356         877,912,000         790,804,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,138,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000         1,1438,000	Rock bolt(2m)	X	_	23.78	•9	30.00	27,585	7,215	34,800	1,682,672,800	440,127,200	2,122,800,000
ing curtain         m         400         35.98         32.41         68.39         14,392         12,964         27,356         877,912,000         790,804,000         1,170         1,170         35.98         14,302         12,964         27,356         877,912,000         790,804,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         2,000         3,000         4,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         3,000         4,000         3,000         3,000         4,000         3,000         4,000         3,000         4,000         3,000         4,000         3,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000         4,000	ing curtain m 400 35.98 32.41 68.39 14,392 12,964 27,356 877,912,000 790,804,000 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 200 1, 20	Mortal injection	E E	· ·	36.61	7.	43.80	7,322	1,438		446,642,000	87,718,000	534,360,000
ing consolidation m 1,170 35.98 32.41 68.39 42,097 37,920 80,016 2,567,892,600 2,313,101,700 4,  ing curtain t 40 143.86 192.38 336.24 5,754 7,695 13,450 351,018,400 469,407,200 2,  ing consolidation t 120 143.86 192.38 336.24 17,263 23,086 40,349 1,053,055,200 1,408,221,600 2,  ing consolidation t 20 143.86 192.38 336.24 17,263 23,086 40,349 7,123,799,600 1,408,221,600 2,  ing consolidation t 2,810 41.56 0.00 41.56 116,784 7,123,799,600 0 7,  ing consolidation t 2,810 41.56 0.00 41.56 116,784 7,123,799,600 0 7,  ing consolidation t 40 143.86 116,784 7,123,799,600 0 7,  ing consolidation t 40 143.86 116,784 7,123,799,600 0 7,  ing consolidation t 40 143.86 116,784 7,123,799,600 0 7,  ing consolidation t 40 143.86 116,784 7,123,799,600 0 7,  ing consolidation t 40 143,716,525 0 7,23,057 120,693 1,017,693 44,106,495,300 17,972,718,225 62,	ing consolidation m 1,170 35.98 32.41 68.39 42,097 37,920 80,016 2,567,892,600 2,313,101,700 4,  ing curtain t 40 143.86 192.38 336.24 5,754 7,695 13,450 351,018,400 4,695,407,200  ing consolidation t 90 563.00 0.00 563.00 50,670 3,090,870,000 0 3,  c (bulk) t 2,810 41.56 0.00 41.56 116,784 7,123,799,600 415,716,525 53  c (bulk) 1.5. 1 415,625 1.017,693 44,106,495,300 17,972,718,225 62,	Drilling curtain	£	400	35.98	32.	68.39	14,392	12,964	27,356	877,912,000	790,804,000	1,668,716,000
ing consolidation t 40 143.86 192.38 336.24 5,754 7,695 13,450 351,018,400 469,407,200 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600 2, 21,600	ing curtain t 40 143.86 192.38 336.24 5,754 7,695 13,450 351,018,400 469,407,200 in 69,407,200 in 69	Drilling consolidation	2	1,170	35.98	1	68.39	42,097	37,920	80,016	2,567,892,600	2,313,101,700	4,880,994,300
ing consolidation t 120 143.86 192.38 336.24 17,263 23,086 40,349 1,053,055,200 1,408,221,600 orange on a consolidation t 90 563.00 0.00 563.00 50,670 0 56,670 3,090,870,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ing consolidation t 120 143.86 192.38 336.24 17,263 23,086 40,349 1,053,055,200 1,408,221,600 oregination t 90 563.00 0.00 563.00 50,670 0 50,670 3,090,870,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Grouting curtain	ţ	0.0	143.86	192	336.24	5,754	7,695	13,450	351,018,400	469,407,200	820,425,600
Decembent     t     90     563.00     6.00     50,670     0     50,670     3,090,870,000     0     0       L (bulk)     t     2,810     41.56     0.00     41.56     116,784     7,123,799,600     0     0       s     1     41.56     0.00     41.56     116,784     7,123,790,600     0     0       s     1     41.56     0.00     41.56     13,662     417,636,500     415,716,525       s     44,106,495,300     17,972,718,225     6	Description     Color     563.00     50,670     O     50,670     3,090,870,000     O       E (bulk)     E (bu	Grouting consolidation	τ :	120	143.86	192.	336.24	17,263		40,349	1,053,055,200	1,408,221,600	2,461,276,800
L (bulk)	t (bulk)     t 2,810     41.56     0.00     41.56     116,784     7,123,799,600     0       s     1.23,057     294,635     1,017,693     44,106,495,300     17,972,718,225     6	Reinforcement	ų į	06	563.00	0	563.00	50,670	0	50,670	3,090,870,000	0	3,090,870,000
3         1.5.         1         6,847         6,815         13,662         417,636,500         415,716,525           82.40         723,057         294,635         1,017,693         44,106,495,300         17,972,718,225         62,	3 L.S. 1 6,847 6,815 13,662 417,636,500 415,716,525 62, 723,057 294,635 1,017,693 44,106,495,300 17,972,718,225 62,	Cement (bulk)	ιţ	2,810	41.56		41.56	116,784	0	116,784	7,123,799,600	0	7,123,799,600
82.40 723,057 294,635 1,017,693 44,106,495,300 17,972,718,225	82.40 723,057 294,635 1,017,693 44,106,495,300 17,972,718,225	Others	1. S	1				6,847	6,815	13,662	417,636,500	415,716,525	833,353,025
723,057 294,635 1,017,693 44,106,495,300 17,972,718,225	723,057 294,635 1,017,693 44,106,495,300 17,972,718,225			82.40			****						
		rotal						723,057	294,635	1,017,693	44,106,495,300	17,972,718,225	62,079,213,525

Table 12-9 Construction Cost of Civil Works Bayram Project (3)

	ä	UNIT OUANTITY	d LIND	UNIT PRICE UNIT:	:05\$)	8	COST (UNIT: USS	_		COST(UNIT:IL)	
	_		LOCAL	FOREIGN	TOTAL	TOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	100			-							
Common excavation	m3	3 59,500	1.12	1.24	2.36	66,640	73,780	140,420	4,065,040,000	4,500,580,000	8,565,620,000
Rock excavation	m3	3 534,900	4.41	2.12	6.53	6.53 2,358,909 1,133,988	1,133,988	3,492,897	143,893,449,000	69,173,268,000	213,066,717,000
Open concrete	료	3 47,710	19.44	12.56	32.00	927,482	599,238	1,526,720	56,576,426,400	36,553,493,600	93,129,920,000
Shoterete	.m2	2,560	8.43	2.98	11.41	11.41 21,581	7,629	29,210	1,316,428,800	465,356,800	1,781,785,600
Reinforcement	¢4	2,390	563.00	00-0	563.00	1,345,570	0	1,345,570	82,079,770,000	0	82,079,770,000
Cement (bulk)	4	15,150	41.56	00.0	41.56	629,634	0	629,634	38,407,674,000	0	38,407,674,000
Others(5%)	1.5.	5.				267,491	90,732	358,223	16,316,939,410	5,534,634,920	21,851,574,330
			<del>!</del>	-							
Total			<b></b> .			5,617,307	1,905,367	5,617,307 1,905,367 7,522,674	342,655,727,610	116,227,333,320	458,883,060,930

(a) thinks (including interest towns.)	207	(100						٠			
MELI	TND	UNIT QUANTITY	TIND	UNIT PRICE(UNIT:US\$)	nss)	00	COST(UNIT:US\$)			COST(UNIT:TL)	
	-		LOCAL	FOREIGN	TOTAL	TOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	-		:					  -			
Common excavation	т.3	90,100	1.12	1.24	2.36	100,912	111,724	212,636	6,155,632,000	6,815,164,000	12,970,796,000
Rock excevation	5	12,100	4.41	2.12	6.53	53,361	25,652	79,013	3,255,021,000	1,564,772,000	4,819,793,000
Tunnel excavation	E	1,600	32.60	05.6	42.00	52,160	15,040	67,200	3,181,760,000	917,440,000	4,099,200,000
Shaft excavation	5	1,200	21.46	12.47	33.93	25,752	14,964	40,716	1,570,872,000	912,804,000	2,483,676,000
Open concrete	H	6,170	19.44	12.56	32.00	119,945	77,495	197,440	7,316,632,800	4,727,207,200	12,043,840,000
Tunnel lining concrete	띭	850	31.70	19.30	00*15	26,945	16,405	43,350	1,643,645,000	1,000,705,000	2,644,350,000
Shaft lining concrete	E.	740	16.79	10.10	26.89	12,425	7,474	19,899	757,900,600	455,914,000	1,213,814,600
Reinforcement	4	0.6	563.00	00.0	563.00	50,670	0	50,670	3,090,870,000	0	3,090,870,000
Rock bolt(2m)	ъс	370	23.78	6.22	30.00	8,799	2,301	11,100	536,714,600	140,385,400	677,100,000
Drilling consolidation	e	1,170	35.98	32.41	68.39	42,097	37,920	80,016	2,567,892,600	2,313,101,700	4,880,994,300
Grouting consolidation	4	120	143.86	192.38	336.24	17,263	23,086	40,349	1,053,055,200	1,408,221,600	2,461,276,800
Mortal injection	Em.	20	36.61	7.19	43.80	1,831	360	2,190	111,660,500	21,929,500	133,590,000
Cement (bulk)	t)	2,530	41.56	00.0	41.56	105,147	0	105,147	6,413,954,800	0	6,413,954,800
Others	Ľ.S.		. :		ALCOHOLOGY AND ADMINISTRATION OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY O	1896'5	898'6	15,335	364,052,575	571,399,200	935,451,775
								-			
Total						623,275	342,789	965,061	38,019,663,675	20,849,043,600	58,868,707,275

Table 12-9 Construction Cost of Civil Works Bayram Project (4)

ITEX	5	UNIT QUANTITY	ETNO	UNIT PRICE (UNIT:	(\$SD:	8	COST(UNIT:US\$)			COST (UNIT: IL)	
	-		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
							-				
Tunnel excavation	тЗ	3,600	32.60	07.6	42.00	52,160	15,040	67,200	3,181,760,000	917,440,0001	4,099,200,000
Tunnel invert concrete	, Cu	120	12.77	12,85	25.62	1,532	1,542	3,074	93,476,400	94,062,000	187,538,400
Shoterete	m2	1,120	8.43	2.98	11.41	9,442	3,338	12,779	575,937,600	203,593,600	779,531,200
Plug concrete.	m3	1 290	16.90	10.29	27.19	106'5	2,984	7,885	298,961,000	182,030,100	480,991,100
Reinforcement	ħ	10	563.00	00.0	563.00	5,630	0	5,630	343,430,000	0	343,430,000
Rock belt(2m)	Þď	420	23.78	6.22	30.00	886.6	2,612	12,600	609,243,600	159,356,400	768,600,000
Cement (bulk)	<b>ب</b>	170	41.56	00.0	41.56	7,065	Ö	7,065	430,977,200	ō	430,977,200
Others(5%)	L.S.	. 1				4,535	1,275	5,811	276,689,290	77,824,105	354,513,395
	<u>:</u>							-			
Total	-				-	95,253	26,791	122,044	5,810,475,090	1,634,306,205	7,444,781,295

MALL	5	UNIT COANTIET	HIND	UNIT PRICE(UNIT:	:: NS\$ }	2	COST (UNIT:US\$)		×	COST(UNIT:IL)	
			LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	-		8					-			
Tunnel horizontal excavation	en m3	1,100	32.60	9.40	42.00	35,860	10,340	46,200	2,187,460,000	630,740,000	2,818,200,000
Tunnel inclined excavation	т.3	3,700	48.90	14.10	63.00	180,930		233,100	11,036,730,000	3,182,370,000	14,219,100,000
Tunnel filling concrete	m3	2,280	16.90	1	27.19	38,532	23,461	61,993	2,350,452,000	1,431,133,200	3,781,585,200
Rock bolt(2m)	20	1,230	23.78		30.00	29,249	7,651	36,900	1,784,213,400	466,686,600	2,250,900,000
Cement (bulk)	4	750	41.56	00.0	41.56	31,170	0	31,170	1,901,370,000	0	1,901,370,000
Others(5t)	ζ.ς.	r1				13,994	4,164	18,158	853,638,270	254,009,490	1,107,647,760
					200						
Total	Ц				:	329,735	91,786	427,521	20,113,863,670	5,964,939,290	26.078.802.960

ITEM	5	UNIT OUNTIFY	TINO	UNIT PRICE (UNIT:	(\$501)	ĝ	COST (UNIT: US\$)	<u> </u>		COST (UNITE PL)	
	_		LOCAL	FOREIGN	TOTAL	LOCAL	rorgion	TOTAL	LOCAL	FOREIGN	TOTAL
	-			<b>-</b>			-	-			
Tunnel excavation	Em.	1,600	32.60	9.40	42.00	52,160	15,040	67,200	3,181,760,000	917.440.000	4.099.200.000
Tunnel invert concrete	m3	120	12.77	12,85	25.62	1,532	1,542	3,074	93,476,400	94,062,000	187,538,400
Shoterete	т.	1,120	8*43	2.98	11.41	9,442	3,338	12,779	575,937,600	203,593,600	779.531.200
Plug concrete	:m3	150	16.90	10.29	27.19	2,535	1,544	4,079	154,635,000	94.153.500	248.788.500
Reinforcement	ı	o.	563.00	0.00	563.00	5,630	0	5.630	343.430.000	C	343,430,000
Rock bolt(2m)	8,	420	23.78	6.22	30.00	9,968	2.612	12,600	609.243.600	159.356.400	000 009 892
Cement (bulk)	ų	170	41.56	00.0	41.56	7,065	0	7,065	430,977,200	0	430.977.200
Others(5%)	Z.S.	1				4,417	1,203	5,621	269,472,990	73,430,275	342,903,265
			-	-			-				
Total						92.769	25, 270	118 048	A KEG 020 700	* E45 026 110	272 020 000 1

Table 12-9 Construction Cost of Civil Works Bayram Project (5)

TONTON (O)				- 1							
HILL	E	UNITE QUANTITY	CNIT	UNIT PRICE (UNIT:	T:US\$)		COST(UNIT:US\$	(		COST(UNIT:TL)	
	_		LOCAL	FOREIGN	TOTAL	TOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
									the second second second		
Arch excavation	Ę				42.00	195,600	26,400	252,000	11,931,600,000	3,440,400,000	15,372,000,000
Bench excavation	5	_			18.00	283,590	010'68	372,600	17,298,990,000	5,429,610,000	22,728,600,000
Arch concrete	Ę	1,830		7.25	35.00	50,783	13,268	64,050	3,097,732,500	809,317,500	3,907,050,000
Wall concrete	Em.	L			36.00	73,489	38,471	111,960	4,482,847,300	2,346,712,700	6,829,560,000
Foundation concrete	m3			7.	29.00	37,077	12,223	49,300	2,261,697,000	745,603,000	3,007,300,000
Slab, Pier concrete	m3		32.95	7.05	40.00	33,280	7,121	40,400	2,030,049,500	434,350,500	2,464,400,000
Barrel concrete	E		21.81	7.	29.00	31,188	10,282	41,470	1,902,486,300	627,183,700	2,529,670,000
Reinforcement	ų	750	563.00	00.0	563.00	422,250	0	422,250	25,757,250,000	0	25,757,250,000
Rock bolt (5m)	<u>р</u>	056	43.60	11.40	55.00	41,420	10,830	52,250	2,526,620,000	660,630,000	3,167,250,000
P.C Anchor(10m)	ŭ	110	959.23	111.77	1,071.00	105,515	12,295	117,810	6,436,433,300	749,976,700	7,186,410,000
P.C Anchor(20m)	ğ	230	1,918.46	223.54	2,142.00	441,246	51,414	. 492,660	26,915,993,800	3,136,266,200	30,052,260,000
Cement (bulk)	u	2,930	41.56		41.56	121,771	0	-121,771	7,428,018,800	0	7,428,018,800
Others(5%)	<u>1.</u>	-~				91,860	15,066	106,926	5,603,485,925	919,002,515	6,522,488,440
	_		:								
Total						1,929,069	316,380	2,245,447	117,673,204,425	19,299,052,815	136,972,257,240
				A TOTAL TOTAL AND THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF					The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		
(9) ACCESS TUNNEL											
WELL	TIME	r Quantity	TINO	PRICE (UN	IT:US\$)	8	COST (UNIT: US\$	(	A CONTRACTOR OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF TH	-COST(UNIT:TL)	
	· ·		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
							4	11. 1			
Common excavation	å	200	1.12		2.36	224	248	472	13,664,000	15,128,000	28,792,000
Rock excavation	m.		4.41		6.53	7,056	3,392	10,448	430,416,000	206,912,000	637,328,000
Tunnel excavation	S.	27,	32.60	9.	42.00	889,980	256,620	1,146,600	54,288,780,000	15,653,820,000	69,942,600,000
Open concrete	m3	360	19.44	12.	32.00	866'9	4,522	11,520	426,902,400	275,817,600	702,720,000
Tunnel lining concrete	E.	066'9	31.70	06-61	21.00	221,583	134,907	356,490	13,516,563,000	8,229,327,000	21,745,890,000
Reinforcement	נו	290	563.00		\$63.00	163,270	0	163,270	9,959,470,000	0	9,959,470,000
Mortal injection	E	1,360	36.61	4.19	43.80	49,790	9,778	895'65	3,037,165,600	596,482,400	3,633,648,000
Rock bolt(2m)	Ď	3,780	23.78		30.00	888,888	23,512	113,400	5,483,192,400	1,434,207,600	6,917,400,000
Cement (bulk)	ų	2,940	41.56		41.56	122,186	0	122,186	7,453,370,400	0	7,453,370,400
Others(5%)	L.S.	7				77,549	21,649	99,198	4,730,475,190	1,320,584,730	6,051,060,920
							*			1 11 11 11	4.41
Total					•	1,628,524	454,628	2,083,152	066,666,688,666	27,732,279,330	127,072,279,320

Table 12-9 Construction Cost of Civil Works Bayram Project (6)

(TO) CADLE TURNEL					***************************************						
WELL	CENE	UNIT QUANTITY	CALE	UNIE PRICE(UNIE:	(\$SD:I)	0	COST (UNIT: USS			COST(UNIT:TL)	A Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Comp
			LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	1				-						
Common excevetion	EE.	200	1.12	1.24	2.36	112	124	236	6,832,000	000/1264,000	14,396,000
Rock excavation	Ę	200	4.42	2.12	6.53	3,087	1,484	4,571	188,307,000	90,524,000	278,831,000
Tunnel excevation	, a	7,100	32.60	9.40	42.00	231,460	66,740	298,200	14,119,060,000	4,071,140,000	18,190,200,000
Open concrete	5	230	19.44	12,56	32.00	4,471	2,889	7,360	272,743,200	176,216,800	448,960,000
Tunnel Lining concrete	Ę	1,730	31.70	19,30	51.00	54,841	33,389	88,230	3,345,301,000	2,036,729,000	5,382,030,000
Reinforcement	4	80	563.00	00.0	563.00	45,040	C	45,040	2,747,440,000	0	2,747,440,000
Mortal injection	THE STATE OF	380	36.61	7.19	43.80	13,912	2,732	16,644	848,619,800	166,664,200	1,015,284,000
Rock bolt(2m)	ĎĠ	1,560	23.78	6.22	30.00	1,097	9,703	46,800	2,262,904,800	591,895,200	2,854,800,000
Cement (bulk)	Ų	780	41.56	00.0	41.56	32,417	C	32,417	1,977,424,800	ło	1,977,424,800
Others(5%)	1.5	1				21,122	5,853	26,975	1,288,431,630	357,036,660	1,645,468,290
	  -  -										
Total						443,559	122,914	566,473	27,057,064,230	7,497,769,860	34,554,834,090

(11) DRAINAGE TONNEL				A CONTRACTOR OF THE SECOND							
XIIII	E	MIT QUANTITY	UNIL	UNIT PRICE (UNIT:	(T:US\$)	ပ္ပ	COST(UNITIUSS)	(		COST(UNIT: II)	
	:	-	LOCAL	rorgian	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
						•			***************************************		
Tunnel excavation	Ę	2,400	32.60	07.6	42.00	78,240	22,560	100,800	100,800 4,772,640,000	000'091'926'1	6,148,800,000
Tunnel lining concrete	Ę	630	31.70	19.30	51.00	176,61	12,159	32,130	1,218,231,000	000'669'174	1,959,930,000
Reinforcement	4	ရ	563.00	00.00	563.00	16,890	0	16,890	1,030,290,000	0	1,030,290,000
Mortel injection	5	160	36-61	7.19	43.80	5,858	1,150	7,008	357,313,600	70,174,400	427,488,000
Rock bolt(2m)	ă.	920	23.78	6.22	30.00	15,457	4,043	19,500	942,877,000	246,623,000	1,189,500,000
Cement (bulk)	1	280	41.56	00 0	41.56	11,637	0	11,637	709,844,800	0	709,844,800
Others(5%)	<u>ر:</u> د	r 1				7,403	1,996	9,398	451,559,820	121,732,820	573,292,640
								}			
Total	Ŀ				:	155,456	41,908	197,363	9,482,756,220	2,556,389,220	12,039,145,440

Table 12-9 Construction Cost of Civil Works Bayram Project (7)

(12) SURGE CRAMBER										C THE TAIL MOOO	
Sec. 1	CHNO	LITTUADO TIND	CELLE	UNIT PRICE (UNIT US\$)	0.55)	8	COST (UNITEDES)			(21:110) 1000	
			LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	ļ										
						1		200	000 000 000	2 030 050 050	13 578 600,000
Tunnel excavation	Ę	300	32.60	9.40	42.00	172,780	49,820	777,000	000,086,866,01	20040000000000	200100000000000000000000000000000000000
Brane Land Conditate	Ē	2.360	31.70	19.30	51.00	74,812	45,548	120,360	4,563,532,000	2,778,428,000	7,341,960,000
Contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction of the contraction o	ŀ		563.00	0.00	563.00	101,340	٥	101,340	6,181,740,000	0	6,181,740,000
Marinal Company	£		36.61	7.19	43.80	3,295	647	3,942	200,988,900	39,473,100	240,462,000
COLUMN THE DESCRIPTION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE	1	380	35.08	32.41	68.39	13,672	12,316	25,988	834,016,400	751,263,800	1,585,280,200
DELLIENG COMBOLLOR	4	9	143-86		336.24	8,632	11,543	20,174	526,527,600	704,110,800	1,230,638,400
cronting constituents:	,		37 78	ı	30.00	13.079	3.421	16,500	797,819,000	208,681,000	1,006,500,000
KOCK DOLT (Zm)	C.		01.00	11.40	25.00	7.412	1.038	9.350	452,132,000	118,218,000	570,350,000
NOCK DOLT ( DM)	1	2 4 6	20.00			35 326	C	35.326	2,154,886,000	0	2,154,886,000
Cement (bulk)	د	000	00.15	3			200	25. 55	1 27 541 706	181 050 735	1.694.520.830
Others(5%)	. s	-				71,31/	707'0	21013	CANADOANT	2016100	
	_			_							
9044	-					451,865	131,495	583,359	27,563,782,995	8,021,154,435	35,584,937,430
10001	-										

(13) SONGE CHAMBER ACCESS TOWNER						6	Sent They May 1950			COSTUDITION	
LTEN	9475	OCANTITE	HHNS	NIT PRICE ONTE:		3	COSTICOSTICOS	,		( Par	
		<u> </u>	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOINT	LOCAL	FOREIGN	TOTAL
	ľ										
	ř	200	32.60	07.6	42.00	6,520	1,880	8,400	397,720,000	114,680,000	512,400,000
1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	3	900	31.70	19,30	51.00	2,853	1,737	4,590	174,033,000	105,957,000	279,990,000
Company transport of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contr	1	o.	563.00		563,00	5,630	0	5,630	343,430,000	0	343,430,000
Marine Commercial	, ~	20	36.61	7.19	43.80	732	764	876	44,664,200	8,771,800	53,436,000
SOLUTION TO SOLUTION		01.	23 28	6. 32	30.00	1.665	435	2,100	101,540,600	26,559,400	128,100,000
NOCK DOLE (Zm)	3 (	2 5	23.17	000		1 662	0		101,406,400	0	101,406,400
Cement (bulk)	,	2	0017	5		200	0		58 130 710	12.798.410	70,938,120
Others (5%)	L-5-	7		12 11 11 11 11 11		50%	^-7		24.4.554.05		
	:		1								
						20,015	4,406	24,421	1,220,933,910	268,766,610	1,489,700,520

Table 12-9 Construction Cost of Civil Works Bayram Project (8)

KELI	UNIT QUANTITY	HIND	UNIT PRICE UNIT:	T:USS)	8	COST (UNITEUS)			COST (UNIT: TL)	A COMPANY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T
		TOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
Common excavation m3		1.12	1.24	2.36	224	248	472	13,664,000	15,128,000	28,792,000
Rock excavation m3	1,700	4.41	2:12	6.53	7,497	3,604	101/11	457,317,000	219,844,000	677,161,000
Tunnel excavation m3	212,000	32.60	05.6	42.00	6,911,200	1,992,800	8,904,000	421,583,200,000	121,560,800,000	543,144,000,000
Open concrete m3	450	19.44	12.56	32.00	8,748	25975	14,400	533,628,000	344,772,000	878,400,000
Tunnel lining concrete m3	F)	31.70	19.30	51.00	956,706	582,474	1,539,180	58,359,066,000	35,530,914,000	93,889,980,000
Tunnel invert concrete m3	7,410	12.77	12.85	25.62	94,626	95,219	189,844	5,772,167,700	5,808,328,500	11,580,496,200
Shoterete m2	58,330	8.43	2.98	11.41	491,722	173,823	665,545	29,995,035,900	10,603,227,400	40,598,263,300
Reinforcement	1,210	563.00	00.0	563.00	681,230	0	681,230	41,555,030,000	ō	41,555,030,000
Mortal injection m3	3,970	36.61	7.19	43.80	145,342	28,544	173,886	8,865,843,700	1,741,202,300	10,607,046,000
Rock bolt(2m) pc	46,260	23.78	6.22	30.00	1,100,063	287,737	1,387,800	67,103,830,800	17,551,969,200	34,655,800,000
Cement (bulk)	16,490	41.56	00.00	41.56	685,324	0	685,324	41,804,788,400	0	41,804,788,400
Others(5%)	1				554,134	158,505	712,639	33,802,178,575	9,668,809,270	43,470,987,845
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s						-/				
Total					11,636,816	3,328,606	3,328,606 14,965,421	709,845,750,075	203,044,994,670	912,890,744,745
(14:) TAILRACE ADIT (1=1,250m : 740+510)	740+510)									
TIMO	UNIT QUANTITY	CELED		Truss)	00	COST(UNIT:US\$	)		COST(UNIT: IL)	
		LOCAL	FOREIGN	TOTAL	COCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
Tunnel excavation	19,400	32.60	9.40	42.00	632,440	182,360	814,800	38,578,840,000	11,123,960,000	49,702,800,000
Tunnel invert concrete		12.77	12.85	25.62	19,155	19,275	38,430	1,168,455,000	1,175,775,000	2,344,230,000
	13,	8.43	2.98	11.41	117,177	41,422	158,599	7,147,797,000	2,526,742,000	9,674,539,000
Plug concrete m3	150	16.90	10.29	27-19	2,535	1,544	4,079	154,635,000	94,153,500	248,788,500
Reinforcement	69	563.00	00.0	563.00	33,780	0	33,780	2,060,580,000	0	2,060,580,000
Rock bolt(2m) pc	5,210	23.78	6.22	30.00	123,894	32,406	156,300	7,557,521,800	1,976,778,200	9,534,300,000
מזג)	1,470	41.56	0.00	41.56	61,093	0	61,093	3,726,685,200	0	3,726,685,200
Others(5%)	Д.				49,503	13,850	63,354	3,019,725,700	844,870,435	3,864,596,135
and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	7									
Total					1,039,577	290,857	1,330,435	63,414,239,700	17,742,279,135	81,156,518,835

Table 12-9 Construction Cost of Civil Works Bayram Project (9)

										· 40 · 104,44 · 100 00	
٢ بانجاد	N.	TTITAL OURSELFY	HIND	CALL PRICE COLL	(350:11)	8	COSH (DATE USS)			COST ( ONTE LET)	
	-		2 - 2			* 2037	AND LOCK	TARCE	10001	PORMICA	TOTAL
			LOCAL	LOKETON	10.4PL		******	70704			
	:										
Common except on	m.3	3.400	1.12	1.24	2.36	3,808	4,216	8,024	232,288,000	257,176,000	489,464,000
	E			-1	32.00	7,582	4,898	12,480	462,477,600	298,802,400	761,280,000
Wounderface Concrete	E E	-		12,56	32.00	31,104	20,096	51,200	1,897,344,000	1,225,856,000	3,123,200,000
Doing Comment	1 *			00.0	563.00	56,300	0	56,300	3,434,300,000	ō	3,434,300,000
Contract (Tri) by	<del> </del> *	009			41.56		O	24,936	1,521,096,000	0	1,521,096,000
Orbert Car	T.S.						1,461	7,647	377,375,280	89,091,720	466,467,000
(2)											
Toto!	+		ļ.			129,916	30,671	160,587	7,924,880,880	1,870,926,120	9,795,807,000

Table 12-10 Construction Cost of Hydraulic Equipment Bayram Project

	is	UNIT OURNITTY	EENO	UNIT PRICE (UNIT:	(\$5)	ಕ	COST (UNIT: USS)			(TT: TTWO) TCO	
	1		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREICN	TOTAL
Diversion date	   tr	0.	4,000.00	00.0	4,000.00	000'07	0	40,000	2,440,000,000	0	2,440,000,000
Spillway gate	4	150	5,440.00	00-0	5,440.00	816,000	0	816,000	49,776,000,000	O	49,776,000,000
Outlet Valvel	4	30	2,112.00	8,448.00	10,560.00	63,360	253,440	316,800	3,864,960,000	15,459,840,000	19,324,800,000
Outlet Valve2	4	20	2,112.00	8,448.00	10,560.00	42,240	168,960	211,200	2,576,640,000	10,306,560,000	12,883,200,000
Intake date		06	1,696.00	6,784.00	8,480.00	152,640	610,560	763,200	9,311,040,000	37,244,160,000	46,555,200,000
Draft gate	4	20	6,080.00	00.00	6,080.00	121,600	C	121,600	7,417,600,000	0	7,417,600,000
Steel penstock	-	009	4,000.00	00.00	4,000.00	2,400,000	٥	0 2,400,000	146,400,000,000	10	146,400,000,000
Tailrace gate	+ <sup>1</sup>	0.1	6,080.00	00.0	6,080.00	60,800	0	60,800	3,708,800,000	0	3,708,800,000
	_										
Total	-					3,696,640	3,696,640 1,032,960 4,729,600	4,729,600	225,495,040,000	63,010,560,000	288,505,600,000

Table 12-11 Construction Cost of Civil Works Bağlık Project (1)

(1) DAM							A Day Charles	-		1 Act - 12 A A A A A A A A A A A A A A A A A A	
MALI		UNIT COANTIEX	, stro	UNIT PRICE (UNITED	: US\$)	8	COST ( ONLT 1025	_		(77: 177)	
		<b>L</b>	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
			Γ								
10 ) 1 40000000	E	6.300	1.12	1.24	2.36	7,056	7,812	14,868	430,416,000	476,532,000	906,948,000
	+	139,800	4.41		6.53	616,518	296,376	912,894	37,607,598,000	18,078,936,000	55,686,534,000
l		196 960	5.80	10.20	26.001	3,080,368	1,988,592	5,068,960	187,902,448,000	121,304,112,000	309,206,560,000
Control of the second	É	005	22.10		38.57	11,050	8,235	19,285	674,050,000	502,335,000	1,176,385,000
Charles things of the control of	Ē	150	16.79	ļ	26.89	2,519	1,515	4,034	153,628,500	92,415,000	246,043,500
ליילי יייל ליילי	E	10.370	35.98	32.41	68.39	373,113	336,092	709,204	22,759,868,600	20,501,593,700	43,261,462,300
Dealling consolidation	ε	7,690	35,98	32.41	68.39	276,686	249,233	525,919	16,877,858,200	15,203,206,900	32,081,065,100
Charles Communications	+	1.040	143.86	192,38	336.24	149,614	200,075	349,690	9,126,478,400	12,204,587,200	21,331,065,600
Growting consolidation	1	390	143.86	1	336.24	56,105	75,028	131,134	3,422,429,400	4,576,720,200	7,999,149,600
Set of Ortonation	Ų	0.7	563.00		563.00	5,630	o	5,630	343,430,000	0	343,430,000
Mortal infection	E.E.	50	36.61	7.19	43.80	1,831	360	2,190	111,660,500	21,929,500	133,590,000
Campant (Na) K	į.	42.450	41.56		41.56	1,764,222	0	1,764,222	107,617,542,000	. 10	107,617,542,000
Others (5%)	ž.					317,236	158,166	475,401	19,351,370,380	9,648,118,375	28,999,488,755
									The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		
30++	1					6,661,948	3,321,484	169,686,6	406,378,777,980	202,610,485,875	608,989,263,855
1000											
			:					- 3			
S (2) SPILLWAY	: .			· · · · · · · · · · · · · · · · · · ·		•					
	TIME	UNIT OUANTITY	KIND	UNIT PRICE(UNIT:	T:US\$)	៥	SSD:IND)ISOD	()		COST(UNIT:TL)	1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		:	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOIL	LOCAL	FOREIGN	TOTAL
	L										
Common excevetion	2	10,200	1.12	1.24	2.36	11,424	12,648	24,072	696,864,000	771,528,000	1,468,392,000
Rock excevetion	3	10,400	4.41	2.12	6.53	45,864	-22,048	67,912	2,797,704,000	1,344,928,000	4,142,632,000
Backfill	5	6,900	1-07	2.15	3.22	7,383	14,835	22,218	450,363,000	904,935,000	1,355,298,000
Oben congrete	3		19.44	12.56	32 00	186,041	120,199	306,240	11,348,488,800	7,332,151,200	18,680,640,000
Reinforcement	4	350	563.00	00.0	563.00	197,050	0	050,761	12,020,050,000	0	12,020,050,000
Cement (bulk)	-	3,020	41.56	00.0	41.56	125,511	0	125,511	7,656,183,200	0	7,656,183,200
Others (5%)	r,	7-1				28,664	8,487	37,150	1,748,482,650	517,677,110	2,266,159,760
									the second second second second second		
Total	<u> </u>					601,937	178,217	780,153	36,718,135,650	10,871,219,310	47,589,354,960

Table 12-11 Construction Cost of Civil Works Bağlık Project (2)

	Come & some & service	the Part	LEGINO MOTOR TIME	: nss:	00	COST (UNITEUSS)			COST (UNIT: IL)	
TYO ENT	~ *********************	4455							,0,10,00	FRECE
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	COCAL	FORETCA	70-70-
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פוסדר מאכם אם כדינוי	1		90 91	0, 0	27.39	21.970	13,377	35,347	1,340,170,000	815,997,000	2,156,167,000
Tunnel Titting Concrete	3	2004						007	1009 600	1007 315 30	160,308,000
Month Transferior	4	09	36.61	7.19	43.80	2,197	437	7,075	7007766000	00-10-0107	
שמד חם דוו מווי רייטוו					١	2.00	5 225	25.200	1.218.487.200	318,712,8001	1,537,200,000
200 k 200 t (2m)	8	0.78	23.78	0.44	20.00	C12427	7.666	227			*** *** ***
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Coment (Durk)	<u>'</u>					П	104	276 61	010 581 873	169.864.260	348,047,270
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1,0 111	-							100	Arc 210 (11 01	1044 041 742 ¢	15 708 GOD 670
10000		-				199,046	58,478	470,102	12,1441,045,21	ADE / EET / / DE / C	21212222222
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Nami	TVE	THAT TO DESCRIPTION AND THE PROPERTY.	TINS.	UNIT PRICE(UNIT:	Tius\$)		COST (UNIT: US\$)			COST (UNITELL)	
F-17-1	5		T&207	PORFIGN	TOTAL.	1,000	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
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But and another the con-	ľ	1.600	32.60	9.40	42.00	52,160	15,040	67,200	3,181,760,000	917,440,000	000,000,000,4
דמטופר פעכמאמריים	+			20 61	35 63	l	1.5.47	3.074	93,476,400	94,062,000	187,538,400
Tunnel invert concrete	_	M. T.	11.77	74.03	70-07	1000	-			300	AAC 1520 ALE
41010	Ŷ	1.120	8.43	2.98	11.41	9,442	3,338	12,779(	575,937,600	203, 593, 600	007*******
			00 91	10.29	27.19	2.535	1,544	4,079	154,635,000	94,153,500	248,788,500
Tred concrete	3						1	200	000 007		243.430.000
Reinforcement	13	2	563.00	00.0	563.00	0,000	5	050,0	200,004,040		20,000
	1		23.78	6.22	30.00	986.6	2,612	12,600	609,243,600	159,356,400	768,600,000
MOCK DOTE (Zm)		-		ŀ	13. 17	7.065	C	7.065	430.977.200	0	430,977,200
Coment (bulk)	در	2/1	9C.1.						444	370 ACA 47	340 003 245
Orbens (54)	.S.					4.417	7,203	77076	703,412,330	0,7400000	20712061710
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	-						l		200 000	1 6 4 5 4 5 6 1 1 1 1 1	7 200 OK8 SKE
Total	_					92,769	25,279	118,048	1,658,852,190	L,342,033,113	500100610071
	1										

Table 12-11 Construction Cost of Civil Works Bağlık Project (3)

WELL	5	UNITH OURNITH	TIND	UNIT PRICE UNIT:	7:055)	00	COST ( UNIT: USS	-		COST(UNIT:TL)	
			LOCAL	FOREIGN	TOTAL	COCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
				1 2 2 2 2 2							
Arch excevation		000'8 Ew	32.60	04.6	42.00	260,800	75,200	336,000	15,906,800,000	4,587,200,000	20,496,000,000
Bench excavation	-	m3 24,500	13.70	4.30	18.00	337,020	105,780	442,800	20,558,220,000	6,452,580,000	27,010,800,000
Arch concrete		пЗ 2,130		7	35.00	59,108	15,443	74,550	3,605,557,500	941,992,500	4,547,550,000
Wall concrete		m3- 3,380	23.63	12.37	36.00	698'64	41,811	121,680	4,872,033,400	2,550,446,600	7,422,480,000
Foundation concrete		m3 2,150		7.19	29.00	46,892	15,459	62,350	2,860,381,500	942,968,500	3,803,350,000
Slab, Pier concrete		m3 1,220		7.05	00.05	40,199	8,601	48,800	2,452,139,000	524,661,000	2,976,800,000
Barrel concrete	1 1	m3 1,580		7.19	29.00	34,460	11,360	45,820	2,102,047,800	692,972,200	2,795,020,000
Reinforcement		± 850		00.0	563.00	478,550	C	478,550	29,191,550,000	0	29,191,550,000
Rock bolt (5m)		pc 1,070	43.60	11.40	55.00	46,652	12,198	58,850	2,845,772,000	744,078,000	3,589,850,000
P.C Anchor(10m)		DC 120	959.23	111.77	1.071.00	115,108	13,412	128,520	7,021,563,600	818,156,400	7,839,720,000
P.C Anchor(20m)		pc 250	1,918.46	223.54	2,142.00	479,615	588'55	535,500	29,256,515,000	3,408,985,000	32,665,500,000
Cement (bulk)	<del> </del>	₹. 3,380	41.56	00.0	41.56	140,473	0	140,473	8,568,840,800	0	8,568,840,800
Others(5%)	ĭ	L.S 1				105,937	17,757	123,695	6,462,171,030	1,083,202,010	7,545,373,040
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Total						2,224,683	372,906	2,597,588	135,705,591,630	22,747,242,210	158,452,833,840
(6) ACCESS TUNNEL		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon									
MAGI	Б	UNIT QUANTITY	TIND	UNIT PRICE(UNIT:	T:US\$)	S	COST (UNIT: US\$			COST(UNIT: IL)	
			TOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
		:									
Common excevation	7	m3 600	1.12	1.24	2.36	672	744	1,416	000,260,05	45,384,000	86,376,000
Rock excevation			4.41	2.12	6.53	22,932	11,024	33,956	1,398,852,000	672,464,000	2,071,316,000
Tunnel excevetion		m3 17,000	32.60	9.40	42.00	554,200	159,800	714,000	33,806,200,000	9,747,800,000	43,554,000,000
Open concrete		m3 490	•		32-00	9,526	6,154	15,680	581,061,600	375,418,400	956,480,000
Tunnel lining concrete		m3 4,350	31.70	19.30	51.00	137,895	83,955	221,850	8,411,595,000	5,121,255,000	13,532,850,000
Reinforcement		180		0.(	563.00	101,340	0	101,340	6,181,740,000	0 11	6,181,740,000
Mortal injenction		m3 850	36.61	7	43.80	31,119	6,111	37,230	1,898,228,500	372,801,500	2,271,030,000
Rock bolt(2m)		pc 2,350			30.00	55,883	14,617	70,500	3,408,863,000	891,637,000	4,300,500,000
Cement (bulk)		1,900	41.56	00.00	41.56	78,964	0	78,964	4,816,804,000	0	4,816,804,000
Others	н	L.S. 1				266,429	74,367	962,045	16,252,137,280	4,536,387,000	20,788,524,280
Total						1.258.060	25K 775	1.616.729	1085 577 305 AC	1000 344 537 15	000 000 000

Table 12-11 Construction Cost of Civil Works Bağlık Project (4)

( ) Company A Constant						3	South Market Same			1 上版・出土に上 1 日の〇〇	
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			LOCAL	FOREIGN	TOTAL	LOCAL	FOREICN	TOTAL	LOCAL	FOREIGN	TOTAL
	-					<del>   </del>					
Common excevation	5	800	1.12	1.24	2.36	260	620	1,180	34,160,000	37,820,000	71,980,000
Rock excavation	5	4,400	4.42	2.12	6.53	19,404	9,328	28,732	1,183,644,000	269,008,000	1,752,652,000
Tunnel excavation	g	5,100	32.60	03.6	42.00	166,260	47,940	214,200	10,141,860,000	2,924,340,000	13,066,200,000
Open concrete	5	470	19.44	12.56	32.00	9,137	5,903	15,040	557,344,800	360,095,200	917,440,000
Tunnel liming concrete	E.	1,240	31.70	19.30	51.00	39,308	23,932	63,240	2,397,788,000	1,459,852,000	3,857,640,000
Reinforcement	4	09	563.00	00.00	563.00	33,780	0	33,780	2,060,580,000	0	2,060,580,000
Mortal injection	3	270	36.61	7.19	43.80	9,885	1,941	11,826	602,966,700	118,419,300	721,386,000
Rock bolt (2m)	8	'		6.22	30.00	26,634	996'9	33,600	1,624,649,600	424,950,400	2,049,600,000
Cement (bulk)	4		41.56	00.00	41.56	26,598	0	26,598	1,622,502,400	0	1,622,502,400
Others (10%)	3:1	7				33,157	699'6	42,820	2,022,549,550	589,448,490	2,611,998,040
	H					-		-			
明の作の計	-				-	364,723	106,293	471,016	22,248,045,050	6,483,933,390	28,731,978,440

(B) DRAINAGE TUNNEL	1										
TES	5115	UNIT QUANTITY	UNIL	UNIX PRICE(UNITS	12:05\$)	300 	COST(UNIT:USS)			COST (UNIT: IL)	
	: -		LOCAL	POREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
Tunnel excevation	SE SE	2,700	32.60	9.40	42.00	88,020	25,380	113,400	5,369,220,000	1,548,180,000	6,917,400,000
Tunnel lining congrete	E	710	31.70	19.30	51.00	22,507	13,703	36,210	1,372,927,000	635,683,000	2,208,810,000
Reinforcement	د	000	563.00	00.0	563.00	16,890	0	16,890	1,030,290,000	10	1,030,290,000
Mortal injection	E.	180	36.61	7.19	43.80	065'9	1,294	7,884	401,977,800	78,946,200	480,924,000
Rock bolt(2m)	8	720	23.78	6.22	30.00	17,122	4,478	21,600	1,044,417,600	273,182,400	1,317,600,000
Cement (bulk)	ų	310	41.56	00.0	41.56	12,884	ō	12,884	785,899,600	0	785,899,600
Others(5%)	L.S.					8,201	2,243	10,443	500,236,600	136,809,580	637,046,180
				1 1 1							
Total	L				:	172,214	47,098	118,911	10,504,968,600	2,873,001,180	13,377,969,780

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Table 12-11 Construction Cost of Civil Works Bağlık Project (5)

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1000	5	1	TOCAL	FORETGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	+										
	i	2000	12 60	0 40	42.00	169,520	48.880	218,400	10,340,720,000	2,981,680,000	13,322,400,000
			31.70	10.30	51.00	71,642	43,618	115,260	4,370,162,000	2,660,698,000	7,030,860,000
Tunner Truth Concrete		1	00 298	00	\$63.00	101,340	0	101,340	6,181,740,000	0	6,181,740,000
1			36.61	7.19	43.80	3,295	647	3,942	200,988,900	39,473,100	240,462,000
MOTURE AND SCHOOL	1	ľ	35.08		68.39	13,672	12,316	25,988	834,016,400	751,263,800	1,585,280,200
Contract Comparation	  -		143.86		336,24	8,632	11,543	20,174	. 526,527,600	704,110,800	1,230,638,400
Control College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College And College An	<u>'</u>		81 24			12.84	3.359	16,200	783,313,200	204,886,800	988,200,000
MOCK DOLU(Zm)	1 2		09 87				1,938	9,350	452,132,000	118,218,000	570,350,000
MOCK DOLL(JIM)	1		95 17		41.56	L	0	33,664	2,053,479,600	0	2,053,479,600
Certain (Auto)	, 0					21,101	6,115	27,216	1,287,153,985	373,016,525	1,660,170,510
	-				1	443 119	128.416	571,534	27,030,233,685	7,833,347,025	34,863,580,710
Total						2441012	240/14	1			ı

110) SURGE CHAMBER ACCESS TUNNEL	ACCESS TUN	1112							1.40 - 10 - 1			
Add (ST)		O'MIND	OUNTILY		UNIT PRICE CNIT:	T:US\$)		COST(UNITIUSS)	:		COST(UNII:TL)	
				3  3		TOTAL	COCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
4							-					
Character Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of the Constitution of	1:	ď	m3 200	32.60	9.40	42.00	6,520	1,880	8,400	397,720,000	114,680,000	512,400,000
Change Change Control	0.10	2	06		19.30		2,853	1,737	4,590	174,033,000	105,957,000	279,990,000
Color Company			07		00.0	S	5,630	0	5,630	343,430,000	0	343,430,000
Mountain Change		7	20		7.19	43.80	732	144	876	44,664,200	6,771,800	53,436,000
See 10 ( 10 ( 10 ( 10 ( 10 ( 10 ( 10 ( 10		٤	70		6.22		1,665	435	2,100	101,540,600	26,559,400	128,100,000
Compat (hij k)		1	4		0.00		1,662	0	1,662	101,406,400	0	101,406,400
Others (5%)		L.S.		H			953	210	1,163	58,139,710	12,798,410	70,938,120
Total							20,015	4,406	24,421	1,220,933,910	268,766,610	1,489,700,520
1												

Table 12-11 Construction Cost of Civil Works Bağlık Project (6)

にはいつの、一日をおしに いつかをはつくこ (ユュ)			;								
MELL	5	UNIT QUANTITY	TIND	UNIT PRICE(UNIT:US\$)	08\$)	ខ	COST(UNIT:US\$	_		COST (UNIT: TL)	
			LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
	<u> </u>							-	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		
Common excavation	Ę	200	1.12	1.24	2.36	224	248	472	13,664,000	15,128,000	28,792,000
Rock excavation	Em	7,500	4.41	2-12	6.53	6,615	3,180	9,795	403,515,000	193,980,000	597,495,000
Tunnel excevetion	Em.	140,800	32.60	9.40	42.00	4,590,080	1,323,520	5,913,600	279,994,880,000	80,734,720,000	360,729,600,000
Open congrete	딢	260	19.44	12.56	32.00	10,886	7,034	17,920	664,070,400	429,049,600	1,093,120,000
Tunnel lining concrete	m3	7,870	31.70	19.30	51.00	249,479	151,891	401,370	15,218,219,000	9,265,351,000	24,483,570,000
Tunnel invert concrete	Ę	7,150	12.77	12,85	25.62	91,306	91,878	183,183	5,569,635,500	5,604,527,500	11,174,163,000
Shotorete	- m2	55,870	8.43	2.98	19-11	470,984	166,493	637,477	28,730,030,100	10,156,048,630	38,886,078,700
Reinforcement	ц —	320	563.00	00.0	563.00	180,160	ô	180,160	10,989,750,000	0	10,989,760,000
Mortal injection	E.	006	36.61	7.19	43.80	32,949	6,471	39,420	2,009,889,000	394,731,000	2,404,620,000
Rock bolt(2m)	bc	25,990	23.78	6.22	30.00	618,042	161,658	001,877	37,700,574,200	9,861,125,800	47,561,700,000
Cement (bulk)	ţ	058'4	41.56	00.00	41.56	326,246	0	326,246	19,901,006,010	ō	19,901,006,000
Others(5%)	L.S.	1				328,849	95,619	424,467	20,059,762,160	5,832,733,075	25,892,495,235
							50 4 10 5 1				
Total	Ц			Ĭ		6,905,820	2,007,992	8,913,810	421,255,005,360	122,487,394,575	543,742,399,935
	:			The same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the sa	; ;						
TOSCILL THE WORK THE VIEW											

(11.) TAILRACE ADIT (1-360m						1					
NELL	ß	DNIE OUANTIEY	TING	UNIT PRICE (UNIT:	: US\$)	ខ	COST(UNIT:US\$)		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	COST(UNITERLY)	
			LOCAL	FOREIGN	TOTAL	TOCAL	FOREICN	TOTAL	LOCAL	FOREIGN	TOTAL
	_			-							
Tunnel excavation	Em.	3 5,600	32-60	07.6	42.00	182,560	52,640	235,200	11,136,160,000	3,211,040,000	14,347,200,000
Tunnel invert concrete	m3	3 440	12.77	12.85	25.62	5,619	5,654	11,273	342,746,800	344,894,000	687,640,800
Shotcrete	m2	2 4,010	8.43	2.98	11.41	33,804	11,950	45,754	2,062,062,300	728,937,800	2,791,000,100
Plug concrete	m3	3 150	16.90	10,29	27.19	2,535	1,544	4,079	154,635,000	94,153,500	248,788,500
Reinforcement	-	20	263.00	00.0	563.00	11,260	0	11,260	686,860,000	0	686,860,000
Rock bolt(2m)	g.	pc 1,500;	23.78	6.22	30.00	35,670	9,330	45,000	2,175,870,000	569,130,000	2,745,000,000
Cement (bulk)	_	t 470	41.56	00.00	41.56	19,533	0	19,533	1,191,525,200	0	1,191,525,200
Others(5%)	L.S.	S. 1				14,549	4,055	18,604	887,492,965	247,407,765	1,134,900,730
we will be account from the control of	1						-				
Total	Н					305,530	85,173	390,703	18,637,352,265	5,195,563,065	23,832,915,330

Table 12-12 Construction Cost of Hydraulic Equipment Bağlık Project

THE PROPERTY OF THE PROPERTY OF											- AM - MA-10 EV-V	
Maint		HIND	UNIT COANTIEX	TIM	UNIT PRICE(UNIT: USS)	(\$50)	ខ	CONTRACTOR	_		(77:17:0) "800	
	.!.	-		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREICN	TOTAL
		Į							-			
A 4 4 4 5 4 5 5 1 5 5 5 5 5		+	09.	5.440.00	00.0	5,440.00	870,400	0	870,400	53,094,400,000	0	53,094,400,000
ביהיה אמן המיהי		,	20	1.696.00	6.71	8.480.00	33,920	135,680	169,600	2,069,120,000	8,276,480,000	10,345,600,000
חייים לטיפו		, 1	20	6.080.00		6.080.00	Γ	0	121,600	7,417,600,000	0	7,417,600,000
מושיר אמרם			055			1.	1.400,000	0	1,400,000	85,400,000,000	0	85,400,000,000
Steel Denstock		,					60,800	o	60,800	3,708,800,000	0	3,708,800,000
דמודומכם מפרם		<u>,</u>	2									
mae a 1							2,486,720	135,680	2,622,400	151,689,920,000	8,276,480,000	159,966,400,000
*0-a*												