

**APPLICATION LETTER FORM FOR PRE-QUALIFICATION**

[Letterhead of the Firm]

Date \_\_\_\_\_

Chairman  
Mechanical and Electrical Department  
 Ministry of Water Resources and Irrigation  
 Taftesh El-Ray Street,  
 Shoubra El-Mazallat, Cairo,  
 Arab Republic of Egypt

Subject : Qualification Documents for the Conveyance System of  
 El Sheikh Gaber El Sabbah Canal Between KM 108.466 and KM 118.560  
 El Salaam No.7 (Bir El Abd) Pumping Station  
 of the North Sinai Development Project

Dear Sir;

We, (name of firm), having examined the Pre-Qualification Documents for the above-mentioned Project, hereby submit, for your evaluation, our Pre-Qualification Documents including the Forms supplied, duly accomplished, as well as other relevant papers. These documents contain full and detailed information of our capabilities.

All information and data submitted herein are true and correct, and we are ready to respond to your queries or give further information relating to our Pre-Qualification Documents through the following person and address.

	<i>For technical information</i>	<i>For financial information</i>
(Name of the person to be contacted)	_____	_____
(Position)	_____	_____
(Tel. No.)	_____	_____
(Fax No.)	_____	_____

We are aware of the right of the Department to accept or reject our tender for the qualification and will thus adhere to the decision of the Department.

Yours sincerely,

	_____	(Signature)
(Seal of Firm)	_____	(Name in print)
	_____	(Title)
	_____	(Name of Firm)

**IDENTIFICATION OF APPLICANT**

MAIN MOTOR MANUFACTURER AND ELECTRICAL EQUIPMENT SUPPLIER

1. Firm's Name: .....  
Country of Registration : .....
2. Year of Establishment : ..... Registration No. :.....  
Type of Organization (tick one):  
\_\_\_\_\_ Corporation, \_\_\_\_\_ Partnership, \_\_\_\_\_ Individually-owned firm
3. Head Office Address:.....  
.....  
Contact Person : .....  
Tel.No.: ..... Fax No.: .....  
E-mail address : .....
4. Quality Assurance Certificate ISO 9001 (yes, no) .....
5. Names & Positions of Principal Officers:.....  
.....  
.....  
.....  
.....
6. Main lines of business (Quote the related clause of registration to prove the category of business) :  
.....  
.....
7. Address of Branch/Liaison Office, or Name & Address of Agent in Egypt, if any.:  
.....  
.....
8. Numbers of Permanent Employees (Total .....)  
(1) Civil (ph.D./Master's....., Bachelor's....., Technicians .....)  
(2) Mechanical (ph.D./Master's....., Bachelor's....., Technicians .....)  
(3) Electrical (ph.D./Master's....., Bachelor's....., Technicians .....)  
(4) Other engg. (ph.D./Master's....., Bachelor's....., Technicians .....)  
(5) Administrative (ph.D./Master's....., Bachelor's....., Technicians .....)  
(6) Total (ph.D./Master's....., Bachelor's....., Technicians .....)
9. Availability of Full-Scale Performance Test Facilities:.....  
.....

Notes : 1. Attach a full copy of company registration and its English translation which should be accompanied by a certificate of correct translation from the Notary Public.  
2. Attach brochures which explain capacity and experience of the firm

**YEARLY CONTRACT AMOUNT/NO. OF CONTRACTS, Concluded in the last 5 years (FY 1995-1999)**

Firm's Name / Country : \_\_\_\_\_

(Unit: U.S.\$)

FY	1995	1996	1997	1998	1999	Average
<b>1. Egyptian Contracts (Total)</b>						
Yearly Contract Amount (US\$ equiv.)						
No. of Contracts						
Average Value per Contract (US\$ equiv.)						
Largest Single Contract Value (US\$ eqv.)						
<b>2. Non-Egyptian Contracts (Total)</b>						
Yearly Contract Amount (US\$ equiv.)						
No. of Contracts						
Average Value per Contract (US\$ equiv.)						
Largest Single Contract Value (US\$ eqv.)						
<b>3. Total of items 1 &amp; 2 above</b>						

Notes: 1. FY means the fiscal year utilized by the firm.

2. Yearly contract amount means the total amount of all contract amounts signed in the particular fiscal year (FY)

3. The contract amount shall be expressed in US\$ by converting the original currency using the average yearly exchange rate (reference selling rate).

**EXPERIENCE IN SIMILAR ELECTRICAL WORKS, COMPLETED IN THE LAST 10 YEARS**  
 (FY 1990 - 1999)

Firm's Name .....

- Notes : 1. List only the contracts in which the value of the Applicant's share is 30 million US \$ (equivalent) or more. (Indicate a maximum of 15 projects.)  
 2. Mark an asterisk (\*) for project(s) in Egypt

No.	Name of Client Country/Year Completed	Name of Project and Location	Description of the Whole Project	Kind of Involvement of the Applicant	Contract Value of the Whole Project (US\$)	Value of Similar Works within the Project (US\$)	Value of Applicant's Share (US\$)	Litigations ? Yes/No or Delay firm's fault ? Yes/No

Note : 1. Give details in Form E-1 for each item.

2. Contract Value, Value of Similar Works and Value of Applicant's Share shall be expressed in US\$ using the exchange rate (reference selling rate) at the time of contracting.

**SIMILAR WORKS - DETAILED EXPERIENCE RECORD**

Firm's Name : .....

Detail Sheet for Item No. \_\_\_\_\_

1. Name of Project/Country : .....
2. Client : .....
3. Major Components of Works : .....
4. Kind of Work performed by Applicant.....
5. Total Contract Value (C.C.....) (Equivalent US \$ .....)  
 If subcontract, Value (C.C.....) (Equivalent US \$ .....)  
 If Joint Venture, percentage .....% (=C.C. .... = Equiv. US\$ .....)  
 Value of Similar Works only (C.C.....= Equiv. US\$.....)
6. Contract Period : (..... months) from..... to.....
7. Actual completion date : .....
8. Litigations/Delays ? Describe : .....

Detail Sheet for Item No. \_\_\_\_\_

1. Name of Project/Country : .....
2. Client : .....
3. Major Components of Works : .....
4. Kind of Work performed by Applicant.....
5. Total Contract Value (C.C.....) (Equivalent US \$ .....)  
 If subcontract, Value (C.C.....) (Equivalent US \$ .....)  
 If Joint Venture, percentage .....% (=C.C. .... = Equiv. US\$ .....)  
 Value of Similar Works only (C.C.....= Equiv. US\$.....)
6. Contract Period : (..... months) from..... to.....
7. Actual completion date : .....
8. Litigations/Delays ? Describe : .....

**Notes :** 1. C.C. = Contract Currency, indicate currency and amount.  
 2. Equivalent US\$: use exchange rate(reference selling rate) at the time of contracting.  
 3. Attach a copy of authenticated Certificate of Completion for each contract issued by the client.

**MOTOR MANUFACTURER - SUPPLY EXPERIENCE OF MOTORS**

**Synchronous Type, AC11kV, 3 Phase and 8,000kW, 10P, or Larger,  
Contracts concluded in last 10 years (FY1990-1999)**

- Notes :
1. List max. ten (10) projects only.
  2. Mark an asterisk (\*) for project(s) in Egypt

No.	Name of Client Country/Year	Name of Project and Location	Type and Size of of Motor	Contract Price	Value of specified motors only (C.C.)	Litigations ? Yes/No	
						Delay due to firm's fault ? Yes/No	

- Notes:
1. C.C. = Contract currency
  2. In case of litigations or delays, explain details in separate sheets and attach.

**DESCRIPTION OF MOTORS SUPPLIED IN EACH PROJECT**

**(Synchronous Type, AC11kV, 50Hz, 8,000kW, 10P, or Larger)**

Project Name/Country : .....  
.....  
.....

Location : .....  
.....

Client : .....  
.....

Consultant : .....

Participation Form :

- Single Contractor
- Motor Supplier (Sub-Contractor)
- Leading Firm in JV/Consortium
- Partner Firm in JV/Consortium

Contract Price : (in equivalent US\$) .....

- As single contract price
- As motor supplier price (sub-contract price)
- If JV/Consortium, percentage in JV/Consortium..... %

Value of motors:

Contract period : ..... months, from ..... to.....

Actual or estimated completion time : .....

Pipeline specifications : .....  
.....  
.....

Project Description : .....  
.....  
.....

Litigations, Delays or Outstanding Matters : .....  
.....  
.....

Note : Attach a copy of Certificate of Completion or Progress Certificate for each contract issued by the client (original or notarized copy)

**AUXILIARY SUBSTATION EQUIPMENT MANUFACTURER – SUPPLY EXPERIENCE  
OF THE SWITCH GEAR AND RELATED EQUIPMENT**

**Indoor use, metal cold type, 3-phase, 11kV, 50Hz, or Larger,  
Contracts concluded in last 10 years (FY1990-1999)**

- Notes :
1. List max. ten (10) projects only.
  2. Mark an asterisk (\*) for project(s) in Egypt

No.	Name of Client Country/Year	Name of Project and Location	Type and Size of Auxiliary Substation Equip't and Switch Gear	Contract Price	Value of specified items only (C.C.)	Litigations ? Yes/No Delay due to firm's fault ? Yes/No

- Notes:
1. C.C. = Contract currency
  2. In case of litigations or delays, explain details in separate sheets and attach.



**DESCRIPTION OF SWITCH GEARS SUPPLIED IN EACH PROJECT**

**(Indoor type, metal cold, 3-phase, 11kV, 50Hz, or Larger)**

Project Name/Country : .....  
.....  
.....

Location : .....  
.....

Client : .....  
.....

Consultant : .....

**Participation Form :**

- Single Contractor
- Leading Firm in JV/Consortium
- Switch Gear Supplier (Sub-Contractor)
- Partner Firm in JV/Consortium

Contract Price : (in equivalent US\$) .....

- As single contract price
- As switch gear supplier price (sub-contract price)
- If JV/Consortium, percentage in JV/Consortium..... %

**Value of switch gears and related equipment:**

Contract period : ..... months, from ..... to.....

Actual or estimated completion time : .....

Pipeline specifications : .....  
.....  
.....

Project Description : .....  
.....  
.....

Litigations, Delays or Outstanding Matters : .....  
.....  
.....

Note : Attach a copy of authenticated Certificate of Completion or Progress Certificate for each contract issued by the client.

**LIST OF CURRENT CONTRACTS**

Firm's Name : .....

No.	Name of Project (Works)	Date of Contract	Date to be completed	Contract Value (US\$ Eq.)	Remaining Value (US\$ Eq.)
	Other Small Contracts (Total Number _____)				
Total Value of Current Contracts (US\$ equivalent) :					
Total Remaining Value of Current Contracts (US\$ equivalent) :					

Notes: The Contract Value and the Remaining Value shall be expressed in equivalent US\$ converted from the original currency using the exchange rate (reference selling rate) of the day of Contract signing.

**DETAILED RECORD OF CURRENT CONTRACTS**

Firm's Name : .....

Detail Sheet for Item No.

1. Name of Project/Country : .....
2. Client : .....
3. Major Components of Works : .....
4. Kind of Work performed by Applicant .....
5. Total Contract Value (C.C. ....) (Equivalent US \$ .....)  
 If subcontract, Value (C.C. ....) (Equivalent US \$ .....)  
 If Joint Venture, percentage ..... % (=C.C. .... = Equiv. US\$.....)
6. Contract Period : (..... months) from..... to.....
7. Remaining Work Value (C.C.) : ..... (Equivalent U.S.\$ .....)
8. Progress percentage completed : .....
9. Litigations/Delay/Outstanding matters : .....

Detail Sheet for Item No.

1. Name of Project/Country : .....
2. Client : .....
3. Major Components of Works : .....
4. Kind of Work performed by Applicant .....
5. Total Contract Value (C.C. ....) (Equivalent US \$ .....)  
 If subcontract, Value (C.C. ....) (Equivalent US \$ .....)  
 If Joint Venture, percentage ..... % (=C.C. .... = Equiv. US\$.....)
6. Contract Period : (..... months) from..... to.....
7. Remaining Work Value (C.C.) : ..... (Equivalent U.S.\$ .....)
8. Progress percentage completed : .....
9. Litigations/Delay/Outstanding matters : .....

Note : ..1.C.C. = Contract Currency, indicate currency and amount.

2.Equivalent US\$:use the exchange rate (reference selling rate)at the time of contracting.

**FINANCIAL STATEMENTS OF COMPANY (LAST FIVE (5) YEARS)**

Firm's Name : .....	1995	1996	1997	1998	(Unit : Local Currency) 1999
Fiscal Year used by the Firm	1995	1996	1997	1998	1999
1. Total Assets	_____	_____	_____	_____	_____
Liquid Assets	_____	_____	_____	_____	_____
Fixed Assets	_____	_____	_____	_____	_____
2. Total Liabilities	_____	_____	_____	_____	_____
Liquid Liabilities	_____	_____	_____	_____	_____
Fixed Liabilities	_____	_____	_____	_____	_____
Reserve Fund	_____	_____	_____	_____	_____
3. Paid-Up Capital	_____	_____	_____	_____	_____
4. Legal Reserve	_____	_____	_____	_____	_____
5. Surplus Fund	_____	_____	_____	_____	_____
Special Reserve	_____	_____	_____	_____	_____
Reserve brought forward	_____	_____	_____	_____	_____
Profit (Loss)	_____	_____	_____	_____	_____
6. Total of items 2 to 5 above	_____	_____	_____	_____	_____
US\$ equivalent	= _____	= _____	= _____	= _____	= _____
7. Annual Turnover	_____	_____	_____	_____	_____

- Notes :
1. Attach copies of audited Balance Sheets and Profit and Loss Statements for the same years.
  2. Attach the Bank Reference (the confirmation credit facility) of a reputable bank issued less than 90 days before the date of submission of these prequalification documents, in accordance with Form I-3.
  3. "Local Currency" means the currency used in the company's own country.
  4. The Local Currency used herein shall be converted to US Dollars using the yearly average exchange rate (reference selling rate) during firm's fiscal year

**Bank Reference from the Bank's Head Office**

[Letterhead of the Bank]

No. ....

Issued at .....  
Date .....

Chairman,  
Mechanical and Electrical Department,  
Ministry of Water Resources and Irrigation

Dear sir,

**Subject : The Confirmation Credit Facility**

Whereas .....(*name of firm*) .....is interested in submitting a prequalification application for "The Conveyance System of El Sheikh Gaber El Sabbah Canal Between KM 108.466 and KM 118.560 El Salaam No.7 (Bir El Abd) Pumping Station" of "The North Sinai Development Project" to the Mechanical and Electrical Department, according to the regulations of the Ministry of Water Resources and Irrigation, the applicant should submit the Confirmation Credit Facility from the bank (head office) for consideration.

By this letter the Bank consents to give the Confirmation Credit Facility to.....  
(*name of firm*) ..... in the amount of ..... (*in figures*) .....US\$  
( .....(*in words*) .....US Dollars).

Yours sincerely,

(Seal of the Bank) .....(*Authorized Signature*)  
.....(*Name in print*)  
.....(*Title*)

- Remarks**
1. The original document shall be sealed "ORIGINAL" on the top of the document.
  2. The copy document shall be sealed "COPY" on the top and certified true copy at the bottom of the document.
  3. The foreign bank shall have its branch in Egypt.
  4. The date of issuance of the present Bank Reference should not be earlier than 90 days before the date of submission of the PQ documents.

**LIST OF ENGINEERS WHO COULD BE ASSIGNED TO THE PROJECT AND ANY ALTERNATIVE ENGINEERS FOR THE INTENDED POSITIONS**

Firm's Name :.....

Individual's Name	Age	Engineering Field	Years of Experience
		Proposed Position	
<b>(1) Work category or work site :</b>			
<b>(2) Work category or work site :</b>			
<b>(3) Work category or work site :</b>			

**DOSSIER OF KEY PERSONNEL (ENGINEER) PROPOSED  
FOR ELECTRICAL WORKS  
(HIGH VOLTAGE TRANSFORMER AND AUXILIARY SUBSTATION)**

Firm's Name :.....

Name : .....

Proposed position : .....

Date of Birth(Age)/Nationality : .....(.....)/.....

Final Education/Country : .....

Specialty/Expertise : .....

Professional Engineer's Licence (No.): .....

English ability (indicate: native, excellent, good, fair or poor):.....

Other languages with rating as above

1. .... 2. .... :

Present position held : .....

Employee of the present firm since : .....

Years of professional career : ..... yrs.

Years of experience in High Voltage Auxiliary Substation & Transformer Works ..... yrs.

Experiences in Particular Projects in the above field:

1. Name of Project/Country :.....

Period engaged :..... months, from ..... to.....

Position held : .....

Description of Works : .....

2. Name of Project/Country :.....

Period engaged :..... months, from ..... to.....

Position held : .....

Description of Works : .....

3. Name of Project/Country :.....

Period engaged :..... months, from ..... to.....

Position held : .....

Description of Works : .....

I certify that I am a full-time employee of the present firm only. I confirm that all the above statements are true and correct.

Date :.....

.....  
(Signature of Employee)

**DOSSIER OF KEY PERSONNEL (ENGINEERS) PROPOSED  
FOR ELECTRICAL WORKS  
(HIGH VOLTAGE MAIN MOTOR AND AUXILIARY EQUIPMENT)**

---

Firm's Name :.....

Name of Engineer : .....

Engineering Field : .....

Proposed position : .....

Date of Birth(Age)/Nationality : .....(.....)/.....

Final Education/Country : .....

Speciality/Expertise : .....

Professional Engineer's Licence (No.): .....

English ability (indicate : native, excellent, good, fair or poor):.....

Other languages with rating as above

1. ....2. .... :

Present position held : .....

Employee of the present firm since : .....

Years of professional career : .....yrs.

Years of experience in High Voltage Main Motor and Auxiliary Electrical Equipment Works: .....yrs.

Experiences in Particular Projects in the above field:

1. Name of Project/Country :.....

.....

Period engaged :.....months, from ..... to.....

Position held : .....

Description of Works :.....

.....

2. Name of Project/Country :.....

.....

Period engaged :.....months, from ..... to.....

Position held : .....

Description of Works :.....

.....

3. Name of Project/Country :.....

.....

Period engaged :.....months, from ..... to.....

Position held : .....

Description of Works :.....

.....

I certify that I am a full-time employee of the present firm only. I confirm that all the above statements are true and correct.

Date : .....

.....  
(Signature of Employee)



## **Appendix B**

### **Information on the Project**

## Appendix B : Information on the Project

### 1. Outline of the Works

Components of the works for this tender are a part of El Sheikh Gaber El Sabbah Conveyance Canal between KM 108.466 and KM 118.560 consisting of sand settling basin, El Salaam No. 7 Pumping Station, pressured delivery pipelines and discharge tank as well as one route of access road. Outline of the works for each category (Civil with Pipes, Mechanical and Electrical Works) in the tender are summarized as follows;

#### 1.1 Pressured Delivery Pipeline

##### (1) Main Pipeline

- Length: 28.05 km (with 3 rows)
- Number of row: 3 rows
- Diameter: 2,400 mm
- Thickness: 22 mm

##### (2) Appurtenant Facilities

- One-way surge tank: 3 units of 300 cu.m capacity with 6 units of diameter 1,500 mm butterfly valves and 6 units of diameter 1,500 mm swing type check valves
- One-way surge tank: 3 units of 22.4 cu.m capacity with 6 units diameter 700 mm butterfly valves and 6 units of 700 mm swing type check valves
- Air valves: 3 rows x 9 units of 200 mm
- Blow-off: 3 rows x 2,400 mm x 400 mm
- Cathodic protection: 9,500 m cable length, 98 sets of high silicone anode and accessories

##### (3) Maintenance Road

- Length: 9.32 km
- Effective width: 14.0 m
- Pavement manners: Asphalt pavement

#### 1.2 Mechanical Equipment

- Main pump: Vertical shaft volute type, rated discharge 10.827 cu.m/sec, 4 units including one standby pump
- Valves: 4 units of diameter 1,900 mm check valves (Bi-plane butterfly type), 4 units of diameter 1,900 mm isolating valves (Bi-plane butterfly type), 3units of diameter 2,400 mm control valves (bi-plane butterfly type)
- Bulkhead gates: 1 unit, with 5.5 m, height 4.0 m
- Suction guide pipe: 4 units
- Header pipe: 1 unit
- Supersonic flow meter: 3 units

- Overhead travel crane: 1 unit, span 17.9 m, hoist capacity 100 tons, height 30.0 m
- Gantry crane: Hoisting capacity 13 tons, span 3.5 m, lifting height 13.0 m
- Stoplog: 5 units, Clear span 5.5 , height 1.55 m
- Trash rake Rake length 2,000 mm, raking capacity 0.5 cu.m/unit, traveling speed 10 m/min.
- Weed trash screen: Height 9.0 m, width 5.5 m, bar pitch 50 mm
- Guard screen: Height 9.0 m, width 5.5 m, bar pitch 100 mm

### **1.3 Electrical Equipment**

#### **(1) Auxiliary Substation**

- Type: Indoor use, metal clad type
- Rating voltage: 3-Phase, 11 kV, 50 Hz
- 11 kV, 1,250 A, VCB (Vacuum circuit breaker) panels for main pump motors: 8 units
- 11 kV, 1,250 A, VCB panel for station transformers: 2 units
- 11 kV, GPT (Grounding potential transformer) panels: 2 units
- Transformer panels for 11 kV/380-220 V, 1,000 kVA Molded type transformer: 2 units

#### **(2) Main Pump Motors**

- Type: 11 kV, 50 Hz, Synchronous motor
- Capacity: 13,000 kW
- Rotation: 375 rpm
- Location: In the pump house building
- Supplied number: 4 units

#### **(3) Main Motor Start and Control Panels**

- Starting method: Kondorfer system
- Autotransformer: 11 kV, 3-minutes rating
- Switch: VCB

#### **(4) DC Power Source for System Control and Emergency Lights**

- Battery: Nickel-Cadmium Alkaline type
- Capacity: 200 Ah for 1-hour rating
- Voltage: DC 220 V

#### **(5) Central Monitoring System**

- Type: CRT Display console type
- Power source: UPS system (Un-interrupted power supply)
- Usage: Monitoring the main pumps, main motors and main pump auxiliary equipment

#### **(6) Emergency Generator System**

- Type: Diesel engine driven, totally enclosed type
- Capacity: 1,000 kVA
- Voltage: AC 380-220V, 50 Hz
- Power factor: 0.8
- Rotation: 1,500 rpm
- Starting method: DC 24 Cell motor
- Location: Basement of the pump building
- Operation: Automatic start and manual stop
- Cooling system: Radiator cooling

### **1.4 Civil Works**

#### **(1) Sand Settling Basin**

- Length: 375 m
- Width: 49.0 m
- Height: Max. 10.5 m
- Roller gates: 2 units, width 10.0 m, height 3.5 m

#### **(2) No. 7 Pumping Station**

##### **(a) Pump Suction Sump and Pump Room**

- Length: Max. 55.5 m
- Width: Max. 52.5 m
- Height: Max. 20.4 m

##### **(b) Pump House**

- Length: 67.0 m
- Width: Max. 27.5 m
- Height: 21.1 m

#### **(3) Discharge Tank**

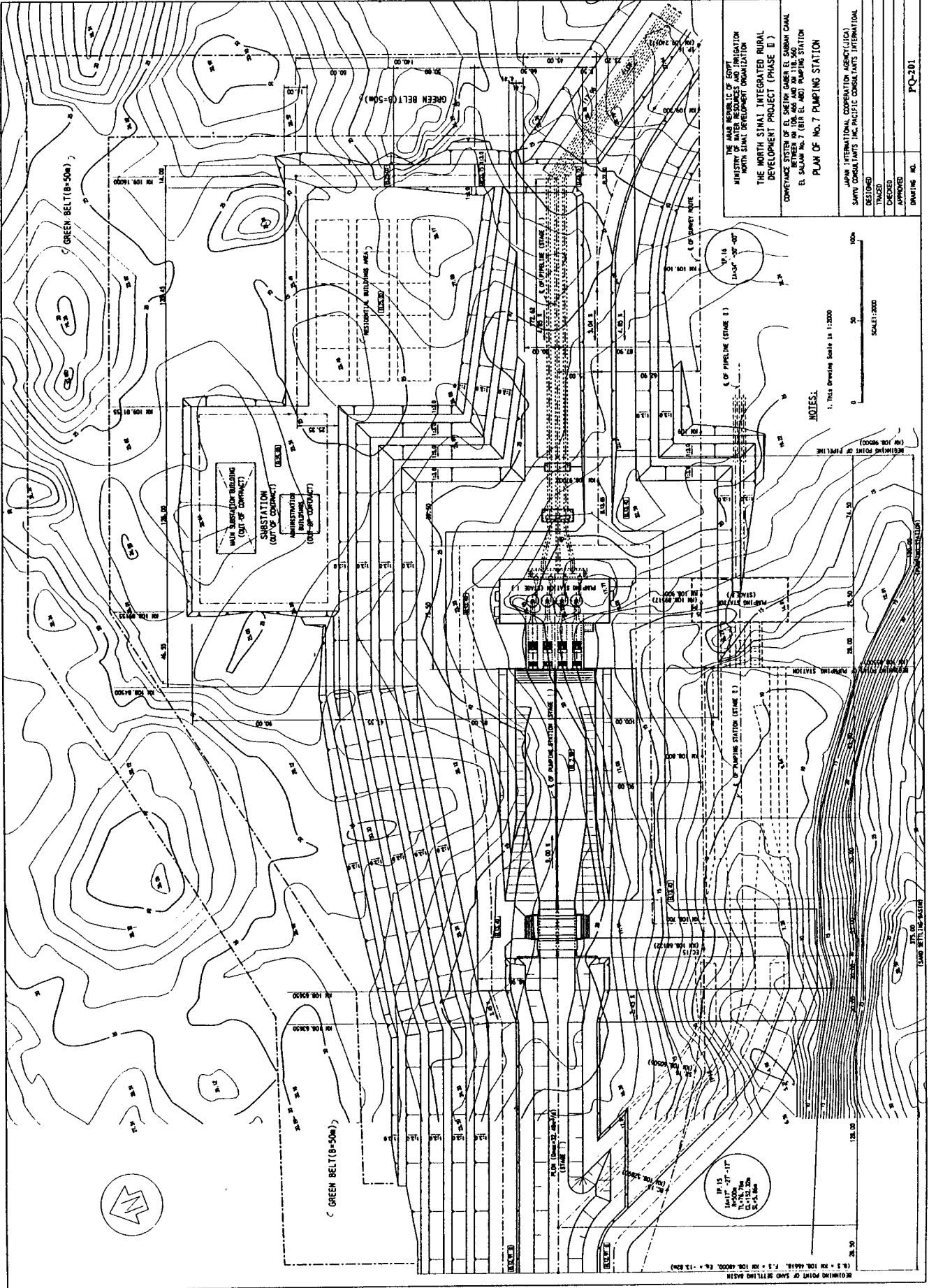
- Length: 200 m
- Width: Max. 23.7 m
- Depth: Max. 6.0 m

#### **(4) Access Road**

- Length: 5.06 km
- Effective width: 14.0 m
- Pavement manner: Asphalt pavement

## 2. Drawings

Album No.	Drawing Title	Drawing No.
1	Plan of No.7 Pumping Station	PQ-201
2	Sand Settling Basin – General Plan and Profile	PQ-202
3	Pumping Station – Plan	PQ-203
4	Pumping Station – Profile and Cross Section	PQ-204
5	Pump House – Ground Floor Plan	PQ-205
6	Pump House – Sections	PQ-206
7	Pump House – Pump Unit Power Supply Single Line Diagram	PQ-207
8	Delivery Pressured Pipeline – Plan and Profile	PQ-208
9	Delivery Pressured Pipeline - Typical Section of Pipeline	PQ-209
10	Delivery Pressured Pipeline – Layout Plan of Surge Tank	PQ-210
11	Delivery Pressured Pipeline – Plan and Section of Surge Tank	PQ-211
12	Discharge Tank – General Plan and Profile	PQ-212
13	Discharge Tank – Detailed Plan, Profile and Sections	PQ-213
14	No.3 Access Road – Plan and Profile	PQ-214
15	No.3 Access Road – Typical Cross Section	PQ-215



THE ARAB REPUBLIC OF EGYPT  
 AIN HELWAN CANAL AUTHORITY  
 NORTH BANK DEVELOPMENT ORGANIZATION

THE NORTH SINAL INTEGRATED RURAL  
 DEVELOPMENT PROJECT (PHASE II)

CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SARAWI CANAL  
 BETWEEN KM 108.440 AND KM 118.540  
 EL SALAM NO. 7 (BIR EL AHD) PUMPING STATION  
 PLAN OF NO. 7 PUMPING STATION

JOINT INTERNATIONAL CORPORATION (JIC) /  
 SINOPEC CONSULTANTS INC. / PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED  
 CHECKED  
 APPROVED  
 DRAWING NO. PQ-201

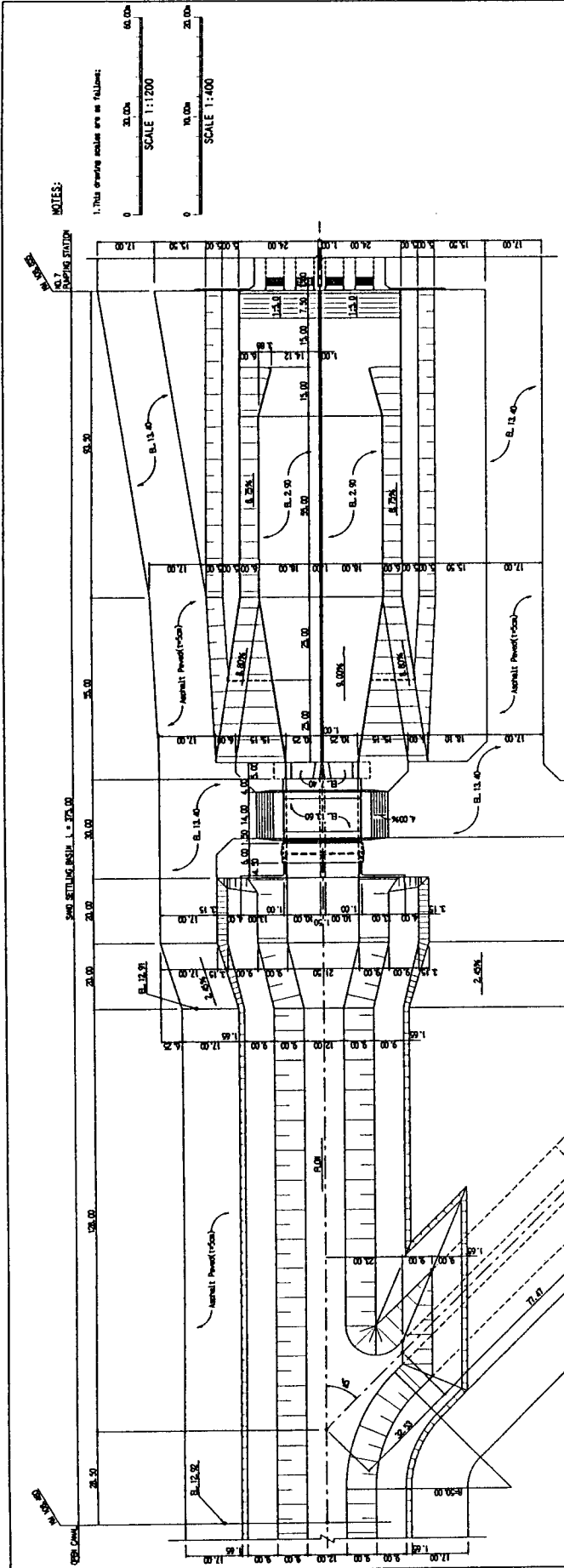
NOTES:  
 1. This drawing Scale is 1:2000

SCALE: 1:2000

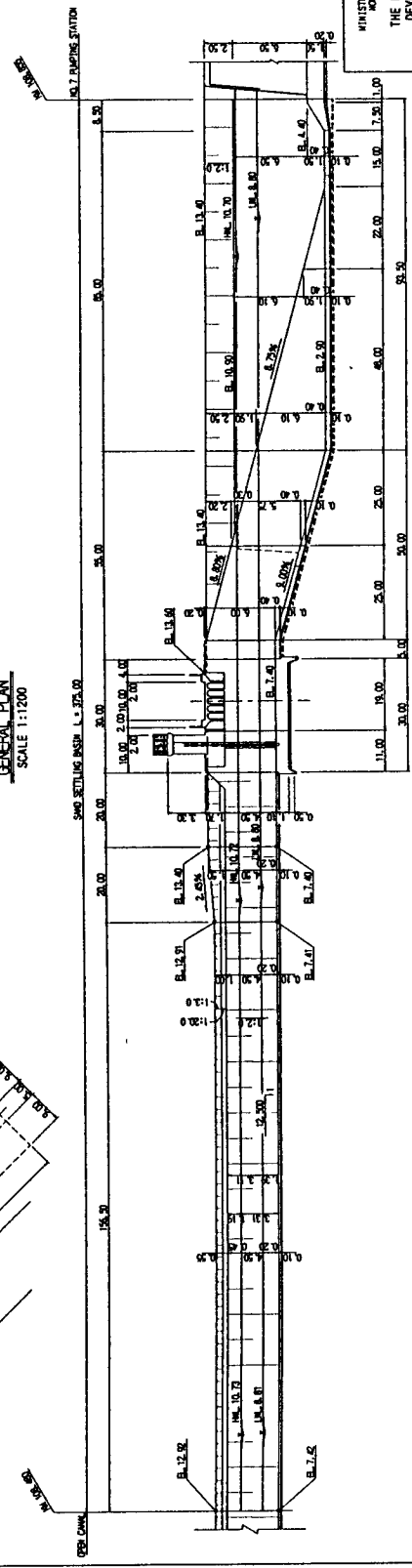
0 50 100m

TP 15  
 10/17/77 - 11/17/77  
 11/18/77 - 12/15/77  
 12/16/77 - 1/15/78  
 1/16/78 - 2/15/78

RETURNING POINT OF SAND SETTLING BASIN  
 (S.S. IN 108.6416, F.S. IN 108.6202, E.A. = 13.82)



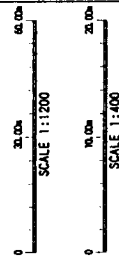
GENERAL PLAN  
SCALE 1:1200



GENERAL PROFILE  
H: SCALE 1:1200 V: SCALE 1:400

NOTES:

1. This drawing scale are as follows:

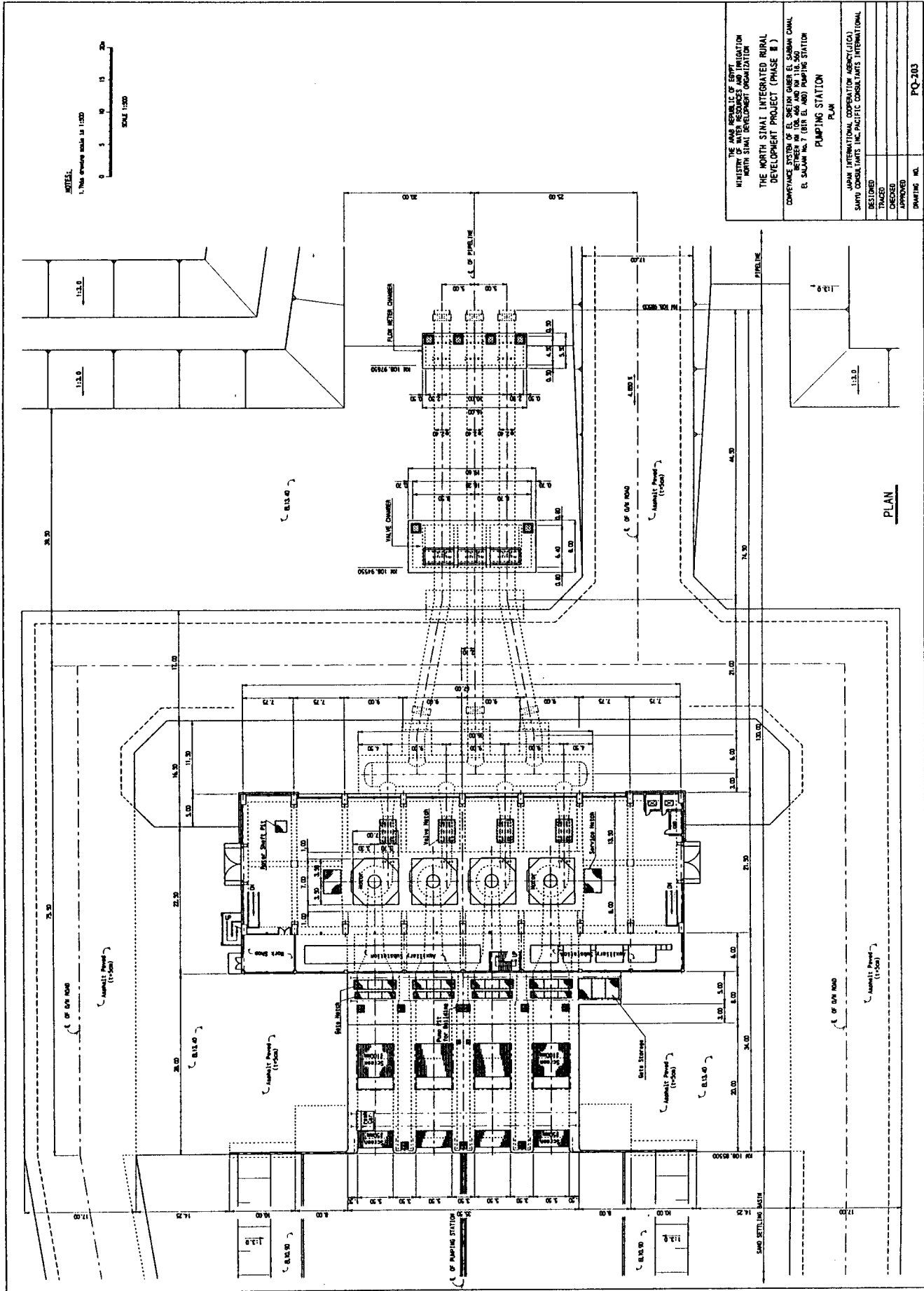
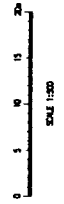


DESIGNED	
DRAWN	
CHECKED	
APPROVED	
DRAWING NO.	PQ-302

THE ARAB REPUBLIC OF EGYPT  
MINISTRY OF PUBLIC WORKS AND WATER RESOURCES  
NORTH SINAI DEVELOPMENT ORGANIZATION  
THE NORTH SINAI INTEGRATED RURAL  
DEVELOPMENT PROJECT (PHASE II)  
CONCRETE CANAL SYSTEM OF SHOUK GABER EL-SARAH CANAL  
NO. 7 PUMPING STATION AND PIPELINE  
(BETWEEN KM 108.400 AND KM 118.500)  
SAND SETTLING BASIN  
GENERAL PLAN AND PROFILE

UNION INTERNATIONAL CORPORATION, SAUDI (UIC)  
SAUDI CONSULTANTS AND ENGINEERS INTERNATIONAL

NOTES:  
1. Note drawing scale is 1:500

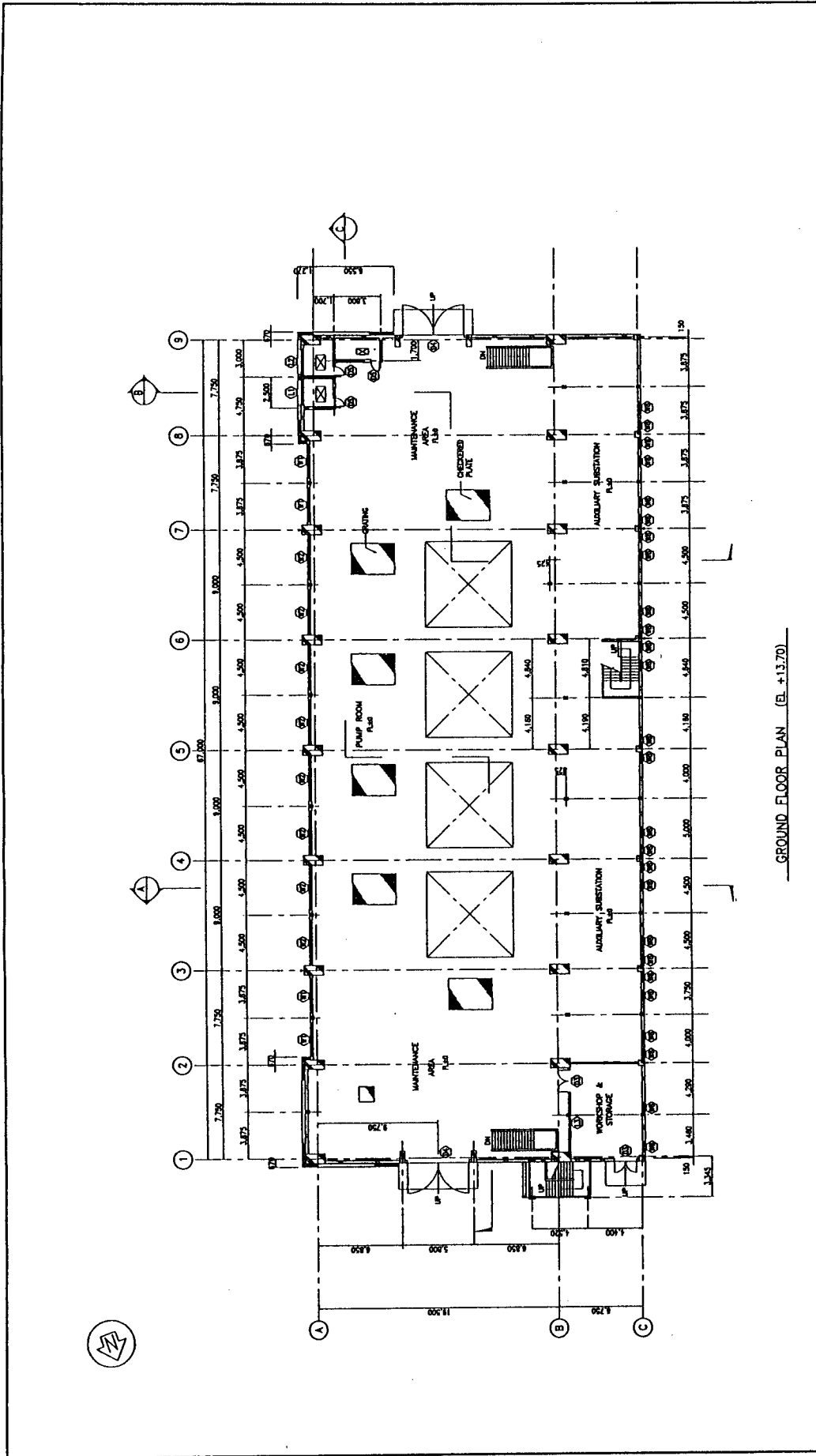


THE KINGDOM OF SAUDI ARABIA  
MINISTRY OF WATER RESOURCES AND IRRIGATION  
SOUTH SUDAN DEVELOPMENT ORGANIZATION  
THE NORTH SUDAN INTEGRATED RURAL  
DEVELOPMENT PROJECT (PHASE II)  
CONCRETE SYSTEM OF EL SHEIKH GAMER EL SALAM CANAL  
BETWEEN KM 106 AND KM 116.500  
EL SALAM No. 7 (BR. EL. AND) PUMPING STATION  
PUMPING STATION  
PLAN

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
SOUTH SUDAN DEVELOPMENT ORGANIZATION  
DESIGNED  
TRACED  
DRESSED  
APPROVED  
DRAWING NO. PQ-203







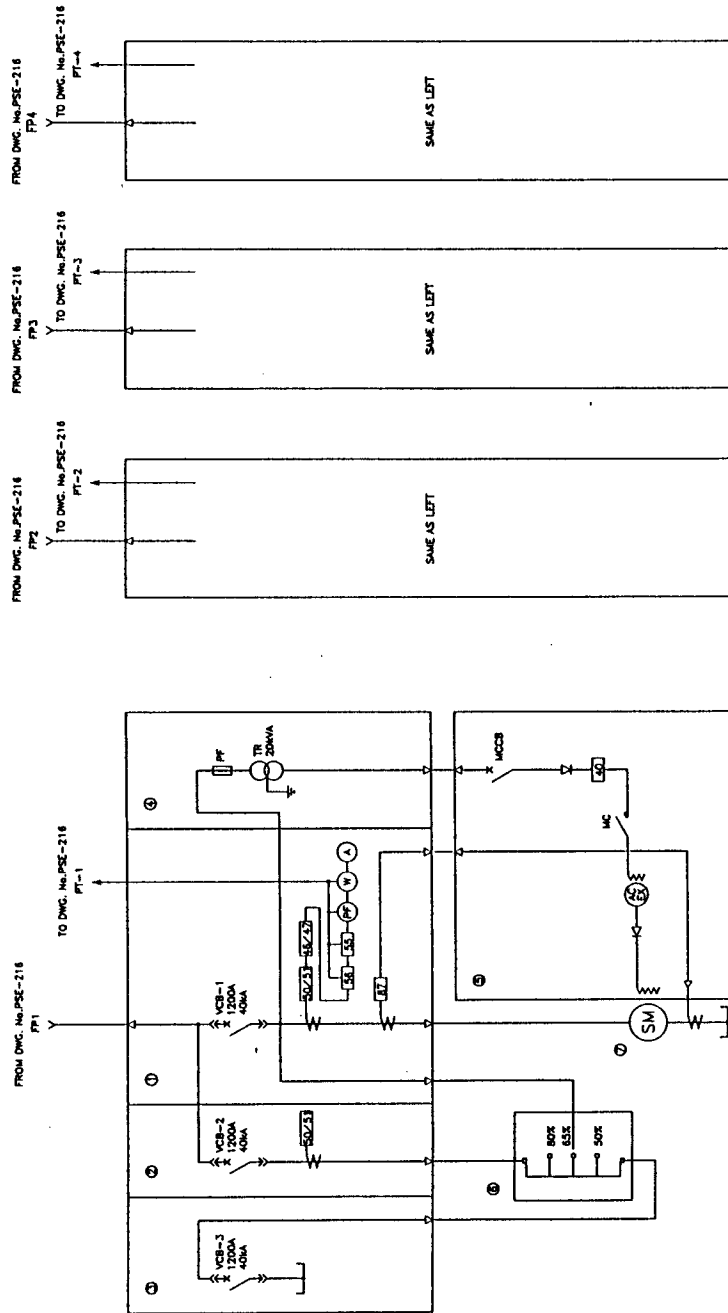
GROUND FLOOR PLAN (EL. +13.70)

THE KINGDOM OF SAUDI ARABIA MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SUDAN DEVELOPMENT ORGANIZATION <b>THE NORTH SUDAN INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)</b>	
CONFERENCE CENTER OF THE MINISTRY OF WATER RESOURCES AND IRRIGATION P.O. BOX 1111, RING RD. OFFICE BUILDING R. SALAMAH ST. (1111 B. AND) PUMPING STATION RIYADH, SAUDI ARABIA	
<b>GROUND FLOOR PLAN (EL. +13.70)</b> PUMP HOUSE	
DESIGNED	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
DRAWN	SANYI CONSULTANTS INC. PACIFIC CONSULTANTS INTERNATIONAL
CHECKED	
APPROVED	
DRAWING NO.	PQ-205



No.	PANEL NAME
①	MAIN PUMP STARTING PANEL (VCB-1)
②	MAIN PUMP STARTING PANEL (VCB-2)
③	MAIN PUMP STARTING PANEL (VCB-3)
④	EXCITER TRANSFORMER PANEL
⑤	EXCITER PANEL
⑥	AUTO TRANSFORMER
⑦	13,000KW SYNCHRONOUS MOTOR

LEGENDS	
52/21	OVER CURRENT RELAY WITH INSTANTANEOUS TRIP ELEMENTS
48/47	OPEN PHASE/REVERSE PHASE
55	POWER FACTOR RELAY
56	OUT OF STEP DETECTING RELAY
87	DIFFERENTIAL RELAY
40	UNDER FIELD CURRENT RELAY
VCB-1-3	VACUUM CIRCUIT BREAKER
PF	POWER FUSE
④	POWER FACTOR METER
④	WATTMETER
Ⓐ	AC AMMETER
Ⓔ	AC EXCITER
MCB	MOLDED CASE CIRCUIT BREAKER
MC	MAGNETIC CONTACTOR



MAIN PUMP-4

MAIN PUMP-3

MAIN PUMP-2

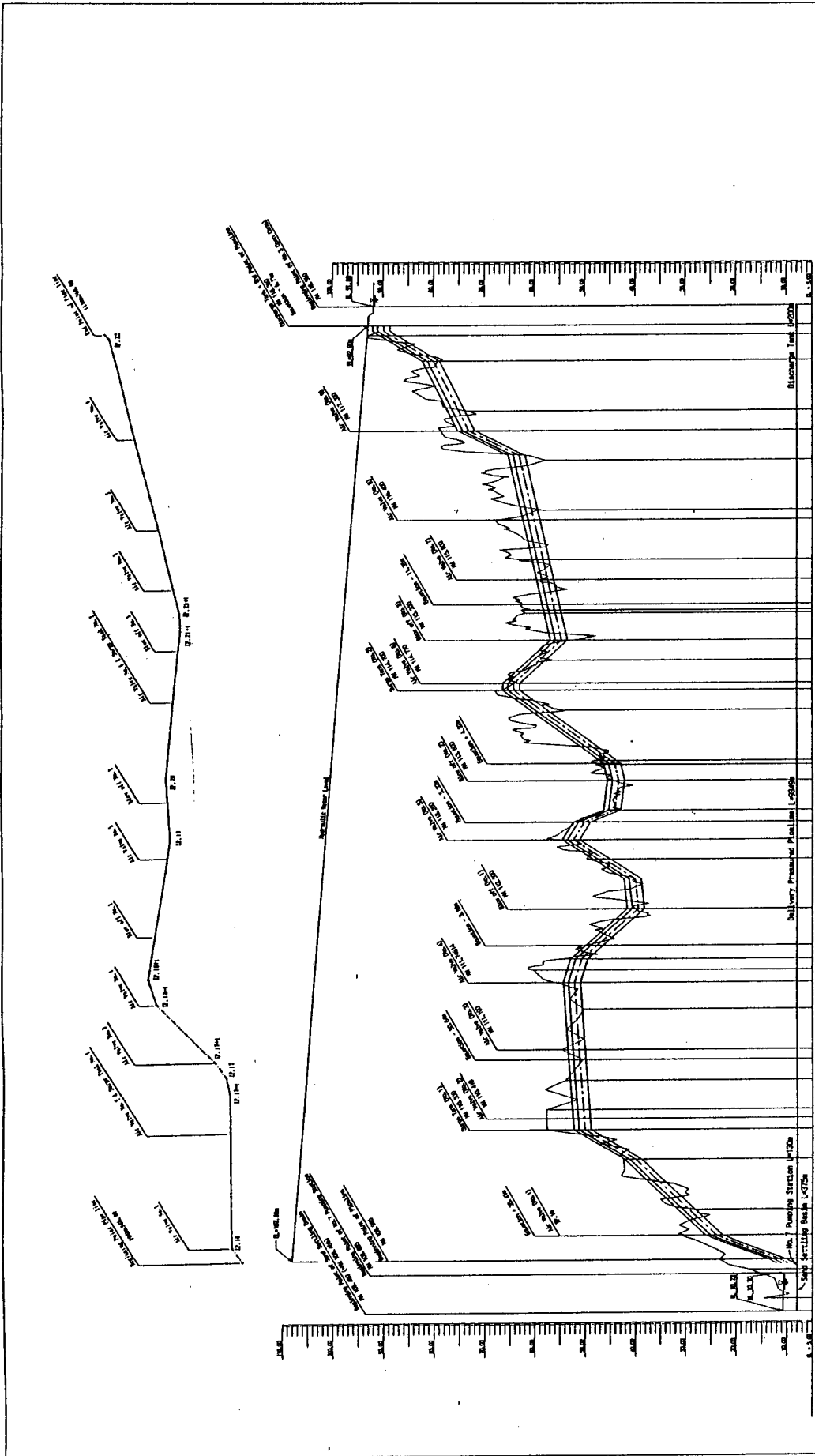
MAIN PUMP-1

THE KINGDOM OF SAUDI ARABIA  
 MINISTRY OF WATER RESOURCES AND IRRIGATION  
 NORTH SUDAN DEVELOPMENT ORGANIZATION  
 THE NORTH SUDAN INTEGRATED RURAL  
 DEVELOPMENT PROJECT (PHASE III)

CONTRACT NO. 101/80  
 S. SUDAN No. 1 (S. S. J. J. J.) PUMP STATION  
 PUMP HOUSE  
 PUMP UNIT POWER SUPPLY SINGLE LINE DIAGRAM

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 SANYO CONSULTANTS INC. PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED  
 CHECKED  
 APPROVED  
 DRAWING NO.



THE KINGDOM OF SAUDI ARABIA  
 MINISTRY OF WATER RESOURCES AND IRRIGATION  
 NORTH SINAÏ DEVELOPMENT ORGANIZATION  
 THE NORTH SINAÏ INTEGRATED RURAL  
 DEVELOPMENT PROJECT (PHASE III)  
 CONDUIT CANAL SYSTEM  
 BETWEEN THE END OF STA EL AND ZONE  
 UNTIL THE BEGINNING OF EL. STA AND EL. NUMBER ZONE  
 PIPELINE  
 PLAN AND PROFILE OF PIPELINE

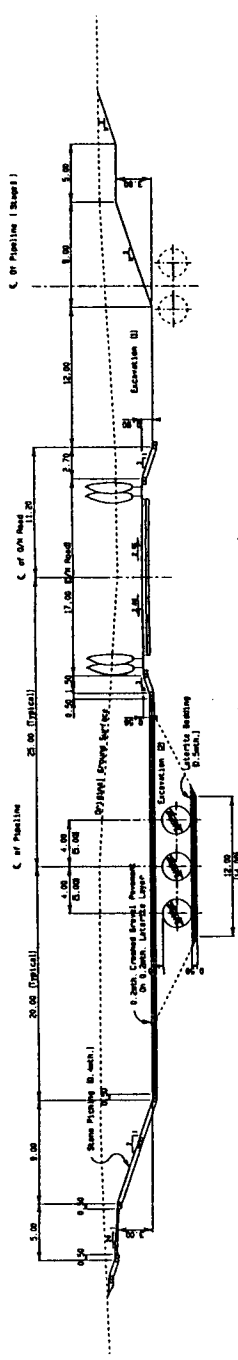
JICA INTERNATIONAL COOPERATION AGENCY (JICA)  
 SAUDI CONSULTANTS INTERNATIONAL  
 DESIGNED  
 DRAWN  
 APPROVED  
 DRAWING NO. PQ-208

DISTANCE (M)	ORIGINAL GROUND SURFACE	PROPOSED WATER LEVEL	ELEVATION OF PIPE CENTER	HORIZONTAL ANGLE
0+00	10.00	10.00	10.00	0°
0+10	10.00	10.00	10.00	0°
0+20	10.00	10.00	10.00	0°
0+30	10.00	10.00	10.00	0°
0+40	10.00	10.00	10.00	0°
0+50	10.00	10.00	10.00	0°
0+60	10.00	10.00	10.00	0°
0+70	10.00	10.00	10.00	0°
0+80	10.00	10.00	10.00	0°
0+90	10.00	10.00	10.00	0°
1+00	10.00	10.00	10.00	0°
1+10	10.00	10.00	10.00	0°
1+20	10.00	10.00	10.00	0°
1+30	10.00	10.00	10.00	0°
1+40	10.00	10.00	10.00	0°
1+50	10.00	10.00	10.00	0°
1+60	10.00	10.00	10.00	0°
1+70	10.00	10.00	10.00	0°
1+80	10.00	10.00	10.00	0°
1+90	10.00	10.00	10.00	0°
2+00	10.00	10.00	10.00	0°
2+10	10.00	10.00	10.00	0°
2+20	10.00	10.00	10.00	0°
2+30	10.00	10.00	10.00	0°
2+40	10.00	10.00	10.00	0°
2+50	10.00	10.00	10.00	0°
2+60	10.00	10.00	10.00	0°
2+70	10.00	10.00	10.00	0°
2+80	10.00	10.00	10.00	0°
2+90	10.00	10.00	10.00	0°
3+00	10.00	10.00	10.00	0°
3+10	10.00	10.00	10.00	0°
3+20	10.00	10.00	10.00	0°
3+30	10.00	10.00	10.00	0°
3+40	10.00	10.00	10.00	0°
3+50	10.00	10.00	10.00	0°
3+60	10.00	10.00	10.00	0°
3+70	10.00	10.00	10.00	0°
3+80	10.00	10.00	10.00	0°
3+90	10.00	10.00	10.00	0°
4+00	10.00	10.00	10.00	0°
4+10	10.00	10.00	10.00	0°
4+20	10.00	10.00	10.00	0°
4+30	10.00	10.00	10.00	0°
4+40	10.00	10.00	10.00	0°
4+50	10.00	10.00	10.00	0°
4+60	10.00	10.00	10.00	0°
4+70	10.00	10.00	10.00	0°
4+80	10.00	10.00	10.00	0°
4+90	10.00	10.00	10.00	0°
5+00	10.00	10.00	10.00	0°
5+10	10.00	10.00	10.00	0°
5+20	10.00	10.00	10.00	0°
5+30	10.00	10.00	10.00	0°
5+40	10.00	10.00	10.00	0°
5+50	10.00	10.00	10.00	0°
5+60	10.00	10.00	10.00	0°
5+70	10.00	10.00	10.00	0°
5+80	10.00	10.00	10.00	0°
5+90	10.00	10.00	10.00	0°
6+00	10.00	10.00	10.00	0°
6+10	10.00	10.00	10.00	0°
6+20	10.00	10.00	10.00	0°
6+30	10.00	10.00	10.00	0°
6+40	10.00	10.00	10.00	0°
6+50	10.00	10.00	10.00	0°
6+60	10.00	10.00	10.00	0°
6+70	10.00	10.00	10.00	0°
6+80	10.00	10.00	10.00	0°
6+90	10.00	10.00	10.00	0°
7+00	10.00	10.00	10.00	0°
7+10	10.00	10.00	10.00	0°
7+20	10.00	10.00	10.00	0°
7+30	10.00	10.00	10.00	0°
7+40	10.00	10.00	10.00	0°
7+50	10.00	10.00	10.00	0°
7+60	10.00	10.00	10.00	0°
7+70	10.00	10.00	10.00	0°
7+80	10.00	10.00	10.00	0°
7+90	10.00	10.00	10.00	0°
8+00	10.00	10.00	10.00	0°
8+10	10.00	10.00	10.00	0°
8+20	10.00	10.00	10.00	0°
8+30	10.00	10.00	10.00	0°
8+40	10.00	10.00	10.00	0°
8+50	10.00	10.00	10.00	0°
8+60	10.00	10.00	10.00	0°
8+70	10.00	10.00	10.00	0°
8+80	10.00	10.00	10.00	0°
8+90	10.00	10.00	10.00	0°
9+00	10.00	10.00	10.00	0°
9+10	10.00	10.00	10.00	0°
9+20	10.00	10.00	10.00	0°
9+30	10.00	10.00	10.00	0°
9+40	10.00	10.00	10.00	0°
9+50	10.00	10.00	10.00	0°
9+60	10.00	10.00	10.00	0°
9+70	10.00	10.00	10.00	0°
9+80	10.00	10.00	10.00	0°
9+90	10.00	10.00	10.00	0°
10+00	10.00	10.00	10.00	0°

PLAN AND PROFILE OF PIPELINE

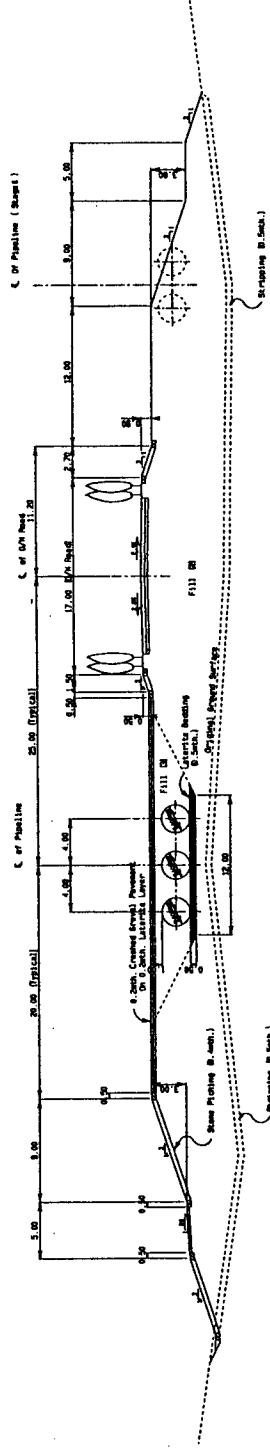
**NOTES:**

- (1) This drawing shows typical section of Pipeline (Sheet) O/M Road and stone pitching.
- (2) Lateral bedding disk foundation shall not be allied with boulder except when or smaller of grain size.
- (3) Bed (1) and (11) of stone circumference shall be satisfactorily connected by adequate machinery, approved by the Engineer.
- (4) Right side of O/M Road is for stone pitching which is not required surface treatment.



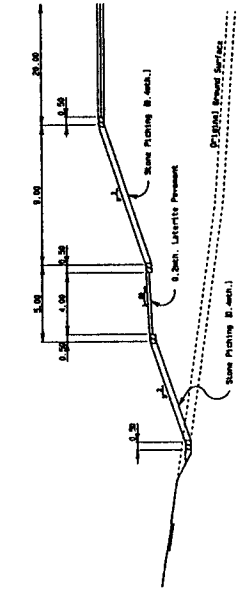
(IN CASE EXCAVATION)

Parenthesis ( ) figures show dimension between 00.000 and 100.000 (EP. 41)

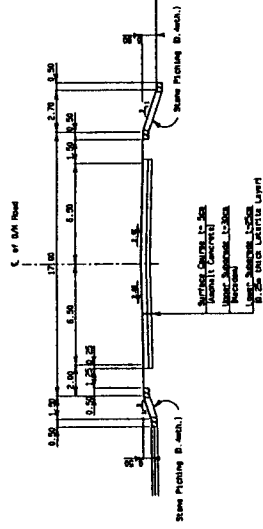


(IN CASE EMBANKMENT)

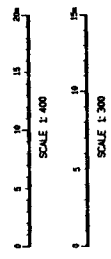
TYPICAL CROSS SECTION OF PIPELINE  
SCALE 1:400



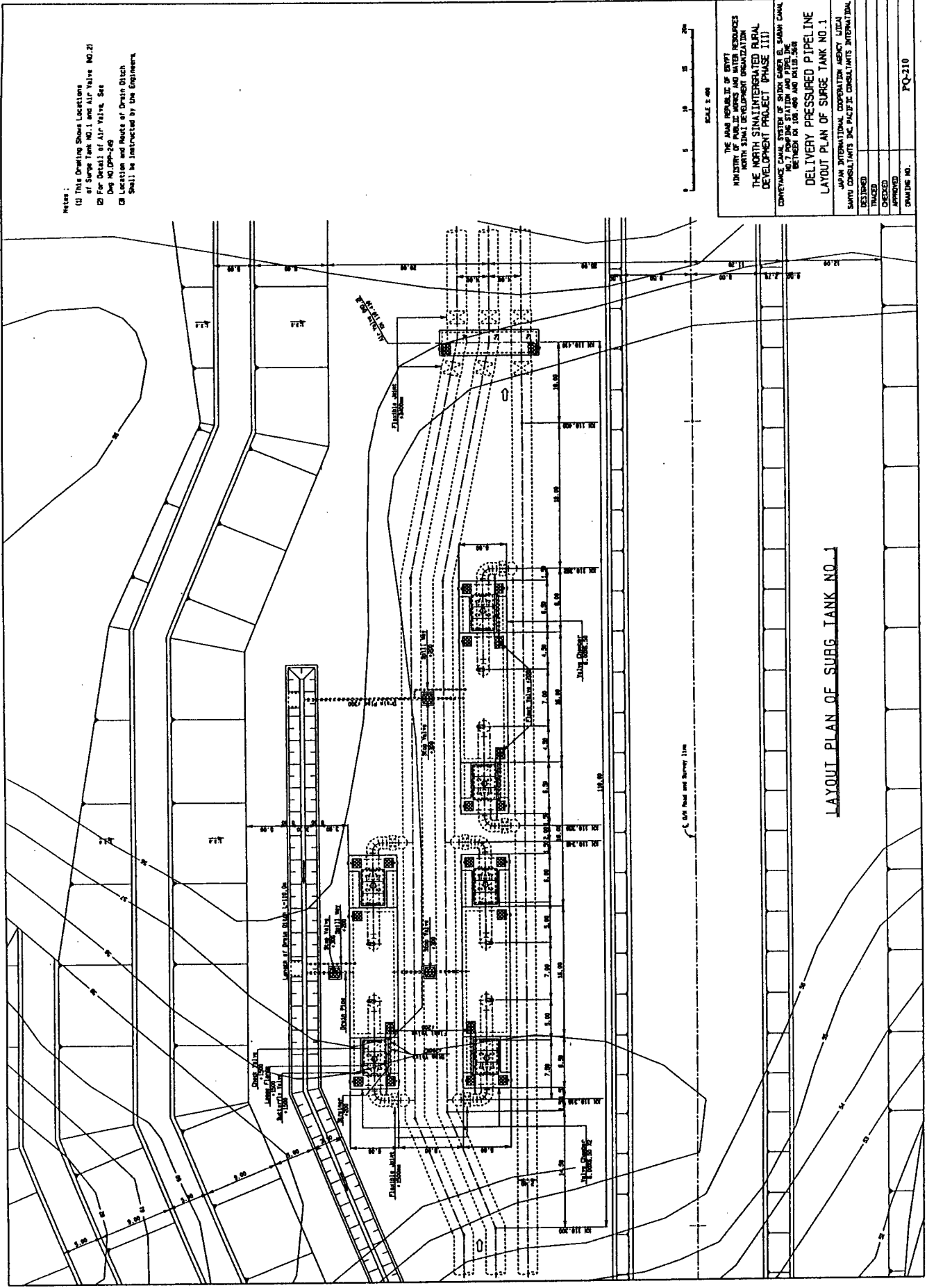
TYPICAL CROSS SECTION OF STONE PITCHING  
SCALE 1:300



TYPICAL CROSS SECTION OF O/M ROAD  
SCALE 1:300



THE ARAB REPUBLIC OF EGYPT	
MINISTRY OF WATER RESOURCES AND IRRIGATION	
NORTH SINAI DEVELOPMENT ORGANIZATION	
THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONTRACT NO. 100/1987	
CONTRACTOR: B. SALAM AND PARTNERS ENGINEERING AND CONTRACTING	
DESIGNED BY: B. SALAM AND PARTNERS ENGINEERING AND CONTRACTING	
CHECKED BY: B. SALAM AND PARTNERS ENGINEERING AND CONTRACTING	
APPROVED BY: B. SALAM AND PARTNERS ENGINEERING AND CONTRACTING	
DRAWING NO. PQ-209	



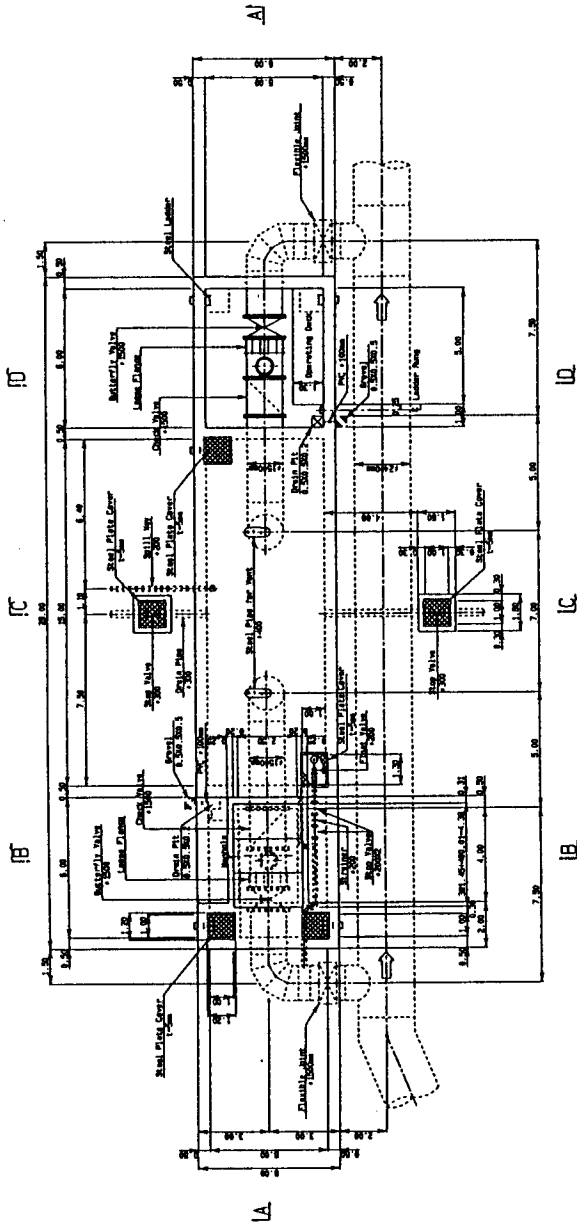
Notes:  
 (1) This Drawing Shows Locations of Surge Tank No. 1 and Air Valve No. 21  
 (2) For Detail of Air Valve, See Dwg No. DPM-249  
 (3) Location and Route of Drain Ditch Shall be instructed by the Engineers.



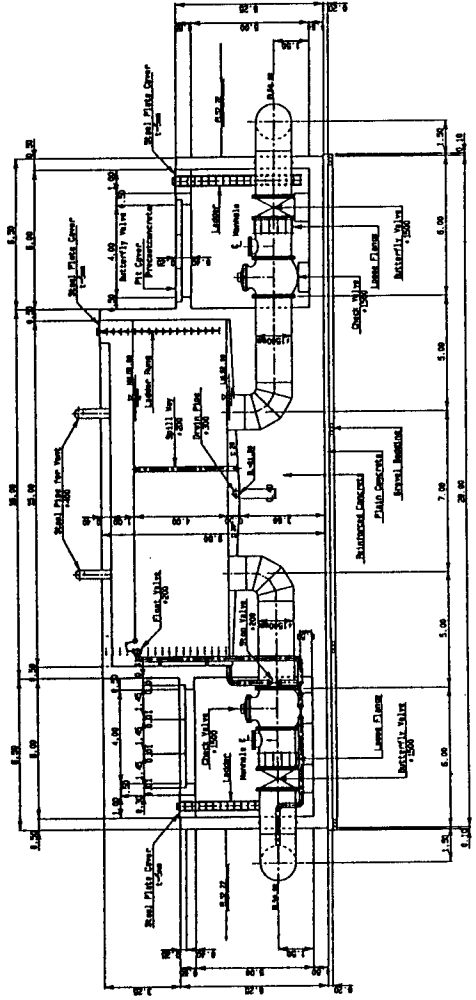
THE KINGDOM OF SAUDI ARABIA MINISTRY OF WATER AND ELECTRICITY NORTH SAUDI DEVELOPMENT ORGANIZATION THE NORTH SAUDI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III) CONVERSION CANAL SYSTEM OF SAUDI ARABIA BETWEEN 101.400 AND 101.500	
DELIVERY PRESSURED PIPELINE LAYOUT PLAN OF SURGE TANK NO. 1	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	
SAUDI CONSULTANTS INC. (PACIFIC CONSULTANTS INTERNATIONAL)	
DESIGNED	
CHECKED	
APPROVED	
DRAWING NO.	PQ-210

LAYOUT PLAN OF SURGE TANK NO. 1

SURGE TANK NO. 1 (1/2)



PLAN



SECTION A-A



THE KINGDOM OF SAUDI ARABIA  
 MINISTRY OF PUBLIC WORKS AND WATER RESOURCES  
 NORTH SUDAN DEVELOPMENT ORGANIZATION  
 THE NORTH SUDAN INTEGRATED RURAL  
 DEVELOPMENT PROJECT (PHASE III)

CONTRACT NO. 101 AND 102  
 BETWEEN THE KINGDOM OF SAUDI ARABIA  
 AND NORTH SUDAN

DELIVERY PRESSURED PIPELINE  
 PLAN AND SECTION OF SURGE TANK

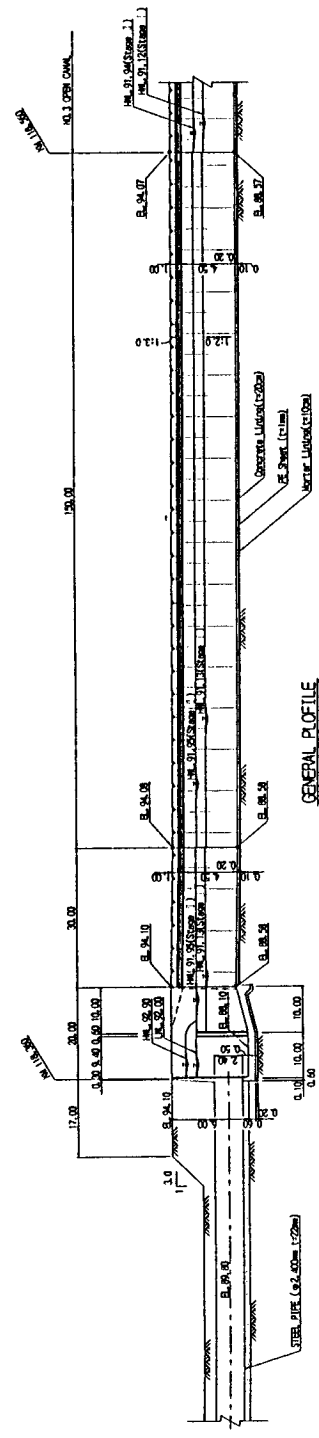
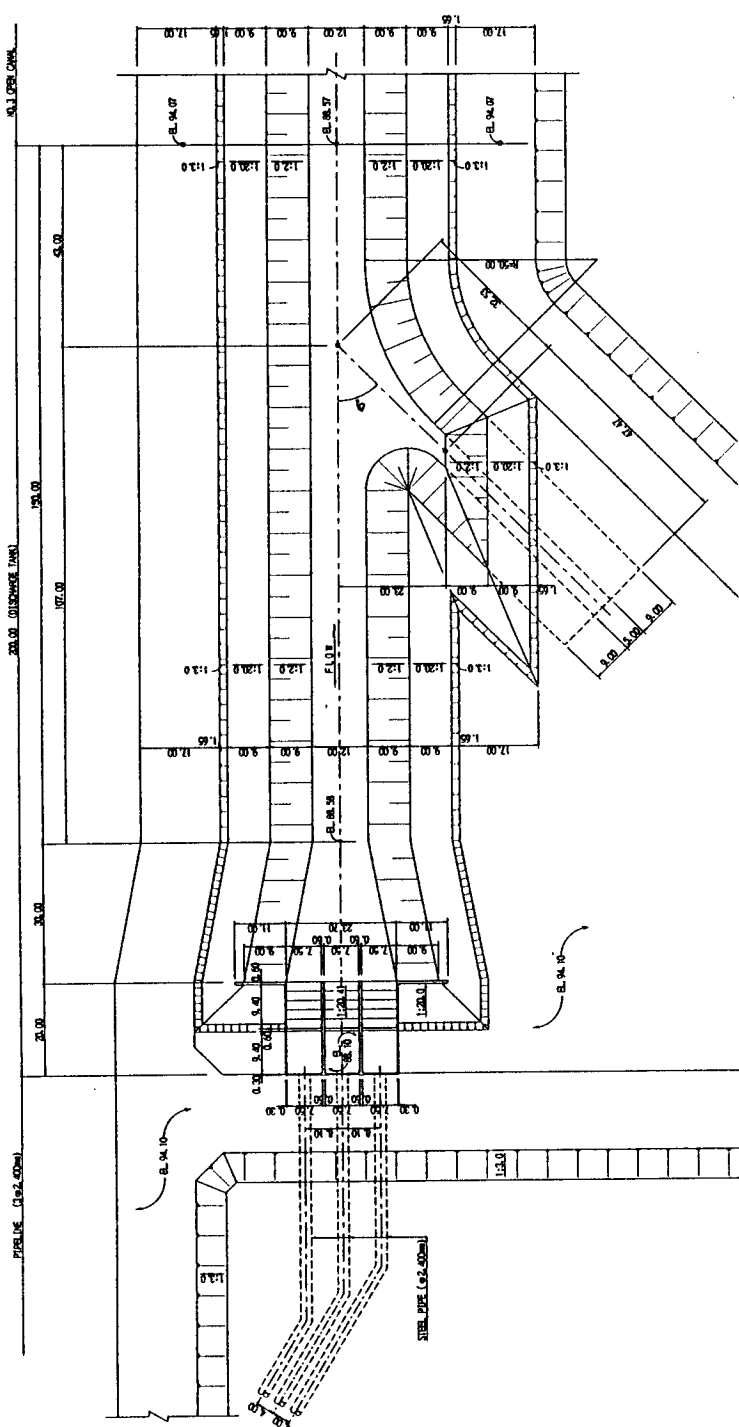
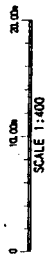
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 SANITARY CONSULTANTS INC. (SCIL) CONSULTANTS INTERNATIONAL

DESIGNED
CHECKED
APPROVED
DRAWING NO.
PQ-211



NOTES:

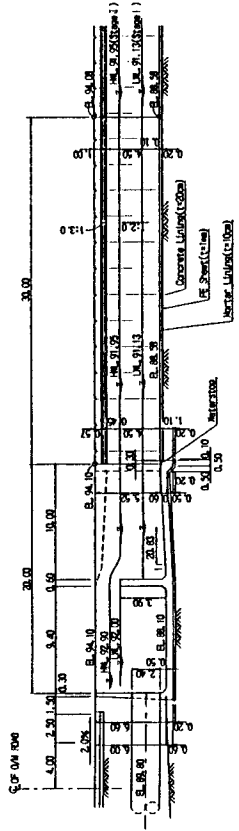
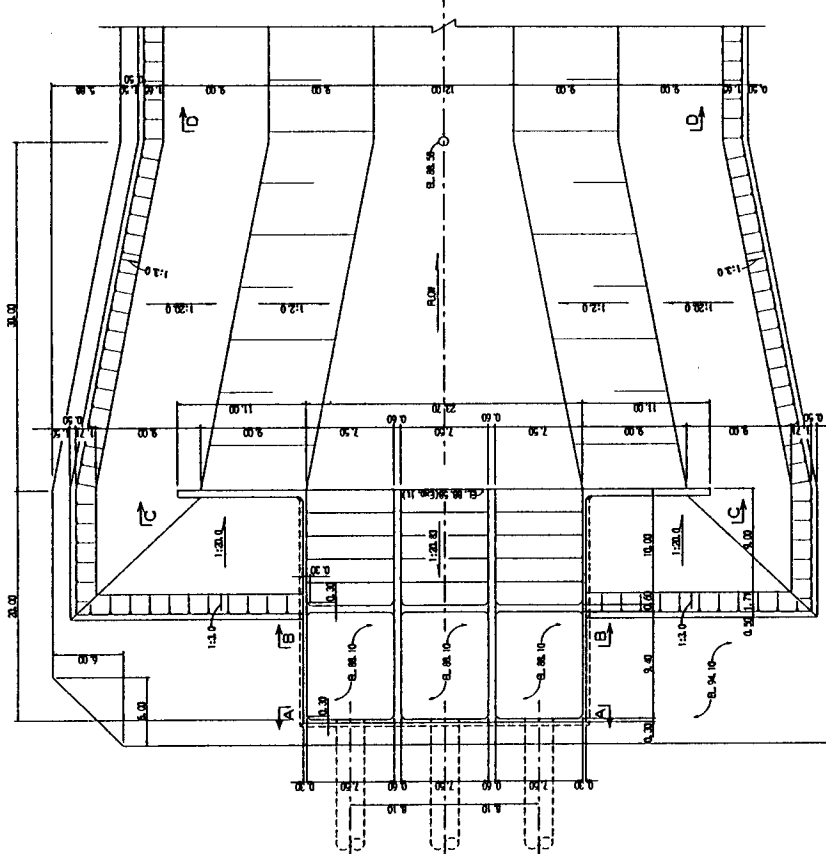
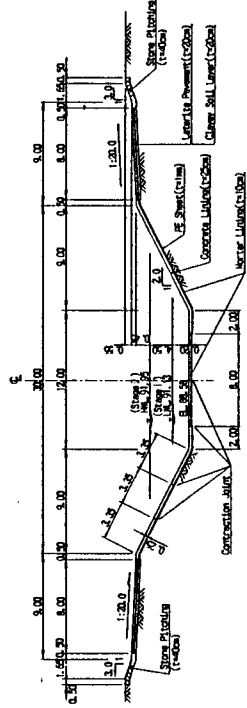
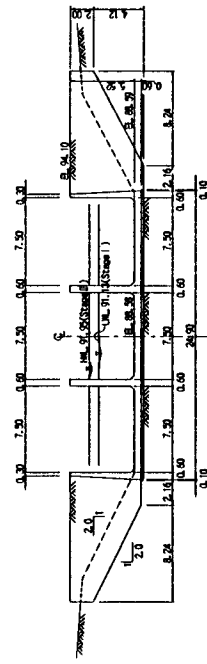
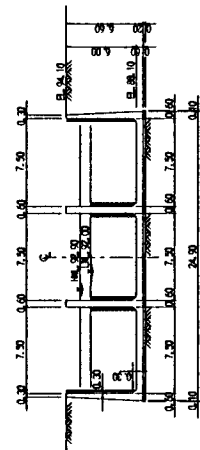
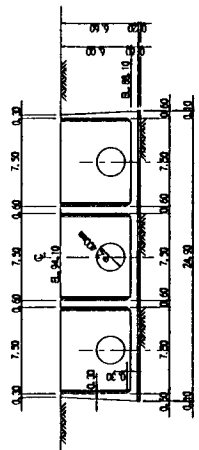
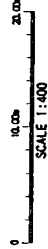
1. This drawing scales are as follows:



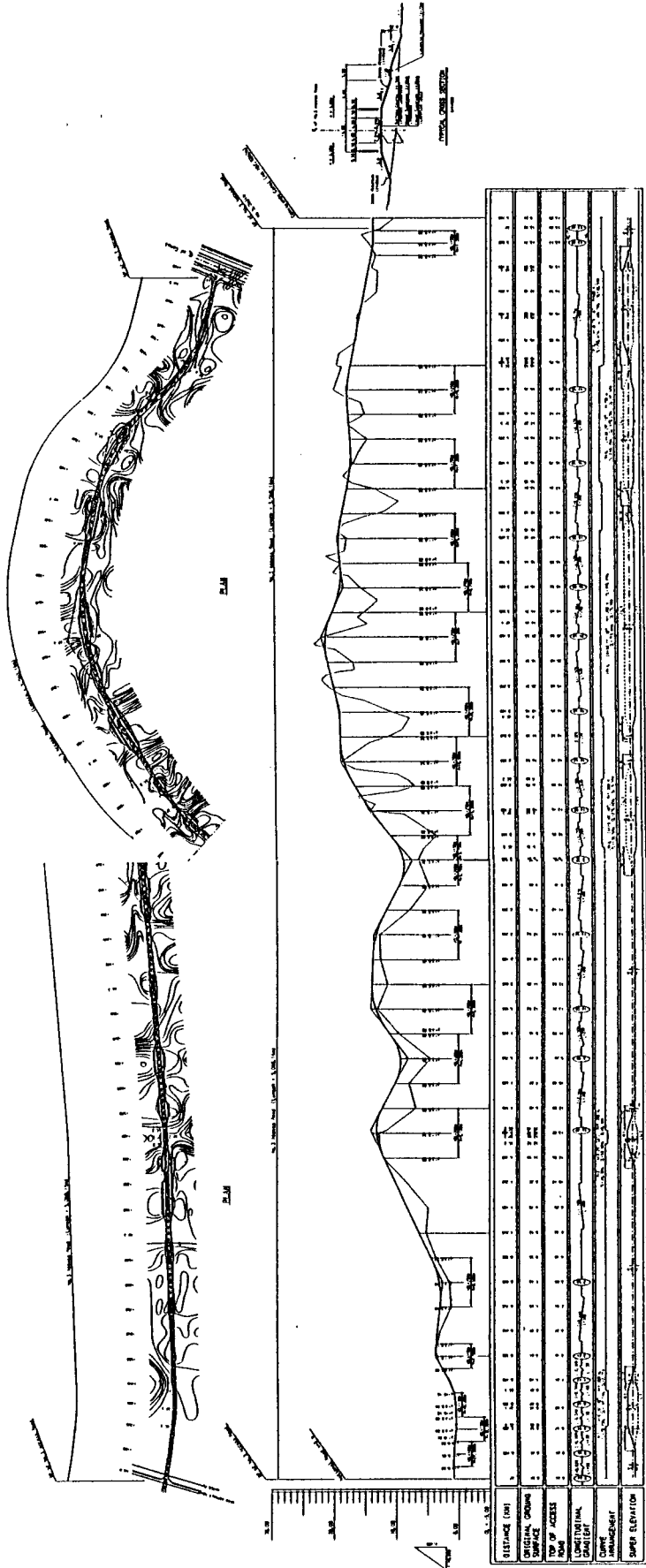
THE KINGDOM OF SAUDI ARABIA MINISTRY OF WATER RESOURCES NORTH SIJUM DEVELOPMENT ORGANIZATION
THE NORTH SIJUM INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE II)
CONVEYANCE CANAL SYSTEM OF SIJUM UPPER E. SIJUM CANAL (BETWEEN STA. 10+00 AND STA. 118+500)
DISCHARGE TANK GENERAL PLAN AND PROFILE
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SATYU CONSULTANTS INC. PACIFIC CONSULTANTS INTERNATIONAL
DESIGNED
TRACED
CHECKED
APPROVED
DRAWING NO.
PQ-212

**NOTES:**

1. This drawing scale is 1:400.



THE ARAB REPUBLIC OF EGYPT MINISTRY OF PUBLIC WORKS AND WATER RESOURCES NORTH SINAI DEVELOPMENT ORGANIZATION THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE 1) CONFERENCE CANAL SYSTEM OF NORTH CANAL, EL-SHARH CANAL No. 7 PUMPING STATION AND PIPELINE (BETWEEN 106+400 AND 118+500) DISCHARGE TANK DETAILED PLAN, PROFILE AND SECTIONS	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SAUDI CONSULTANTS INC./PACIFIC CONSULTANTS INTERNATIONAL	
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
DRAWING NO.	PQ-113



THE ARAB REPUBLIC OF EGYPT  
 MINISTRY OF WATER RESOURCES AND IRRIGATION  
 NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL  
 DEVELOPMENT PROJECT (PHASE II)

COMPLETION STUDY OF THE ACCESS ROAD TO EL-SALAM CANAL  
 EL-SALAM NO. 7/8TH EL-ABDOLMAMMAD STATION  
 NO. 3 ACCESS ROAD  
 PLAN AND PROFILE

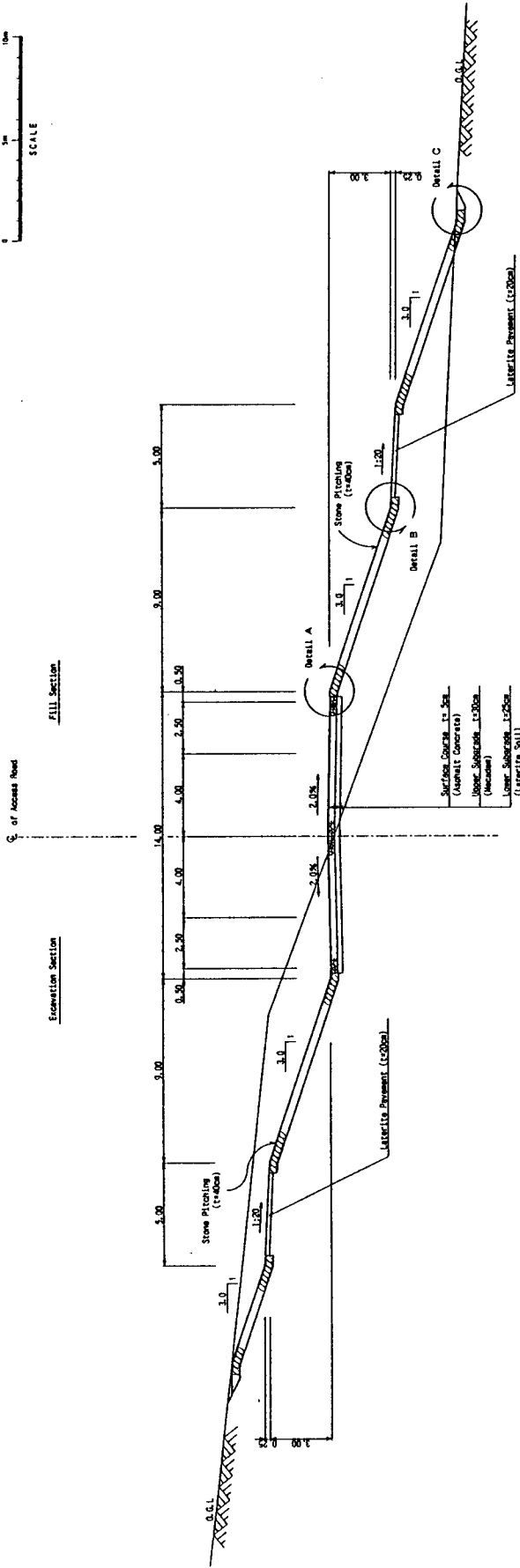
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 SANJO CONSULTANTS INC-PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED  
 TRACED  
 CHECKED  
 APPROVED

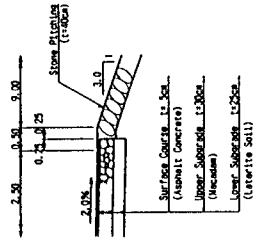
DRAWING NO. PQ-214

**NOTES:**

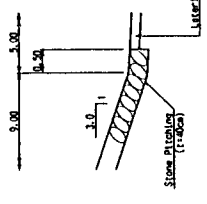
1. This drawing scale is S=1:200



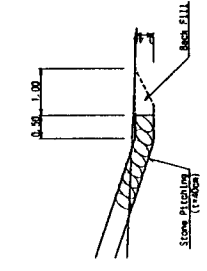
TYPICAL CROSS SECTION



DETAIL A



DETAIL B



DETAIL C

THE ARAB REPUBLIC OF EGYPT MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SINAH DEVELOPMENT AUTHORITY	
THE NORTH SINAH INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE II)	
CONTRACT NO. 108.056 AND 104.118.500 EL. SALAM WATER TREATMENT STATION NO.3 ACCESS ROAD	
TYPICAL CROSS SECTION	
SINAI INTERNATIONAL CORPORATION (SIC/EGYPT) SINAI CONSULTANTS INC./SINAI CONSULTANTS INTERNATIONAL	
DESIGNED	
CHECKED	
APPROVED	
DRAWING NO.	PO-215