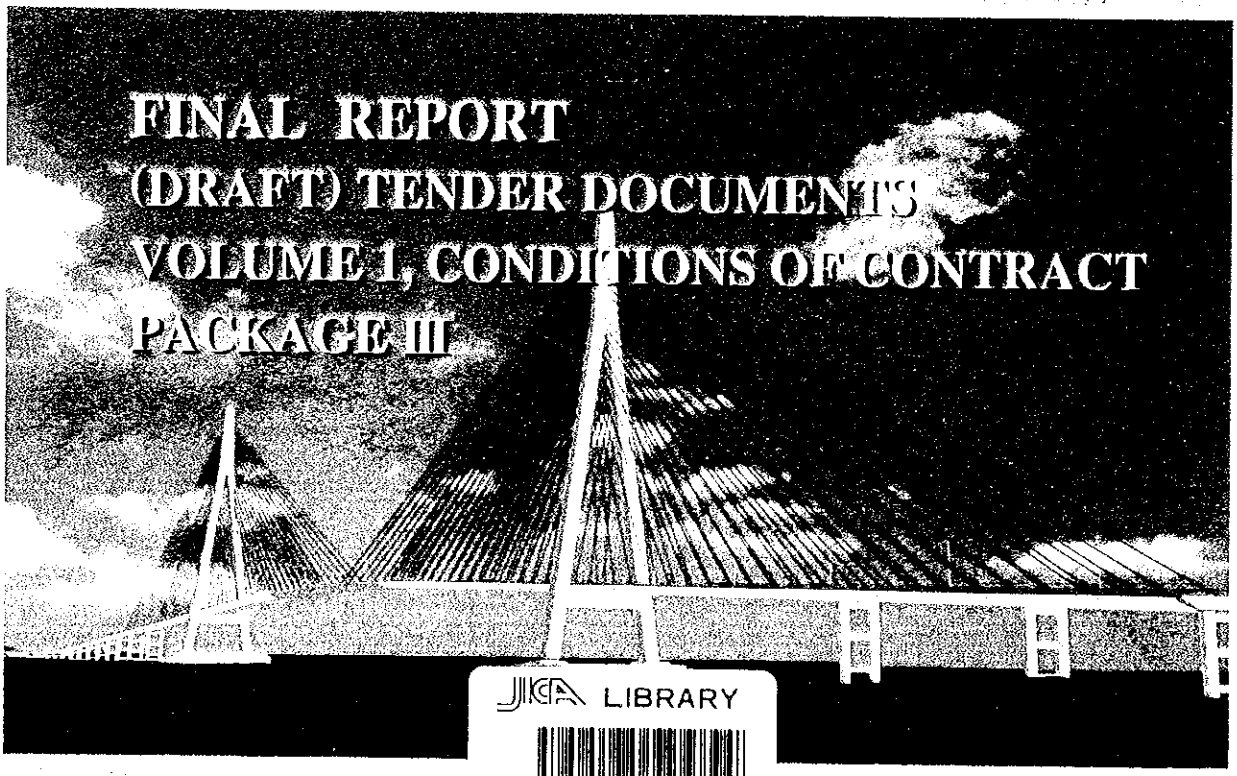
社会開発調査部報告書

No. 32

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF TRANSPORT
SOCIALIST REPUBLIC OF VIET NAM

THE DETAILED DESIGN ON THE CAN THO BRIDGE CONSTRUCTION IN SOCIALIST REPUBLIC OF VIET NAM



FINAL REPORT
(DRAFT) TENDER DOCUMENTS
VOLUME 1, CONDITIONS OF CONTRACT
PACKAGE III

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OCTOBER 2000

NIPPON KOEI CO., LTD.

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MINISTRY OF TRANSPORT
SOCIALIST REPUBLIC OF VIET NAM

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SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT
MY THUAN PROJECT MANAGEMENT UNIT
My Thuan Project Management Unit (My Thuan PMU)
127B Dinh Tien Hoang St, Binh Thanh District Ho Chi Minh City - Viet Nam
Tel: (84 - 8) - 841 0088; Fax: (84 - 8) – 841 1872

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Under JBIC Loan Agreement
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INVITATION TO TENDER AND FORM OF ACKNOWLEDGEMENT

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

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INVITATION TO TENDER

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

Dear Sirs,

INVITATION TO TENDER

1 Introduction

The Government of the Socialist Republic of Viet Nam has received loan funding from the Japan Bank for International Cooperation, hereinafter referred to as "JBIC", towards the cost of the Can Tho Bridge Construction Project.

On behalf of the MINISTRY OF TRANSPORT, My Thuan Project Management Unit, hereafter referred to as "My Thuan PMU" proposes to appoint a contractor for the Can Tho Bridge Construction Project, Package.

Can Tho bridge crosses the Hau River at km 2061 on No. 1 National Highway, about 3.2 km downstream from the existing Can Tho ferry crossing and is located adjacent to Can Tho city.

Tenders are invited from companies pre-qualified by My Thuan PMU for the performance of the Works subject to the attached Conditions of Tender, the Conditions of Contract and the Specification.

The tender evaluation will include non-price matters related to capability to perform this Contract.

2 Conditions Of Tendering

Tenderers should note that by submitting a tender tenderers agree to be bound by the Conditions of Tendering.

3 Conditions Of Contract

The Conditions of Contract are based on FIDIC "Fourth Edition 1987, Reprinted 1988 with editorial amendments, Reprinted 1992 with further amendments", supplemented by Special Conditions.

The Contract includes both fixed price and re-measured works.

4 Tender Security

A Tender Security of ¥800,000,000 shall be submitted with the tender. **(Package 3)**

5 Validity Of Tenders

Tenders shall remain valid for a period of 150 days from the expiration of the tender deadline.

6 Tender Deadline

Four copies of the Tender shall be lodged by the tender deadline, being no later than 09.00 hrs on ???? 2001.

7 Address For Lodgement Of Tenders

The address for the lodgement of tenders is:

My Thuan Project Management Unit (My Thuan PMU),
127B Dinh Tien Hoang St,
Binh Thanh District,
Ho Chi Minh City,
Viet Nam

The outside of the tender package shall be endorsed as follows:

Tender for:
Can Tho Bridge Construction Project,
Package III

DO NOT OPEN BEFORE TENDER DEADLINE OF 9.00 AM ON (date of submission)

8 Project Manager And Contact Person

The My Thuan PMU Project Manager and Contact Person is Mr Le Long Dinh, Director General.

The Design Consultant for the project and the address for the lodgement of post-tender submissions is:

The Study Team of the Detailed Design on the Can Tho Bridge Project,
Nippon Koei Co., Ltd
C/o My Thuan Project Management Unit (My Thuan PMU),
5th Floor
127B Dinh Tien Hoang St,
Binh Thanh District,
Ho Chi Minh City,
Viet Nam
Tel: (84 - 8) – 510 2654, 510 2655 & 510 2656;
Fax: (84 - 8) – 841 3547
Email: koeikanto@hcm.fpt.vn

The contact person at the Design Consultant's office is:

Mr Koji Enomoto,
Team Leader

9 The Site

Can Tho City is located 167 km southwest of Ho Chi Minh City, and is the largest and most important city in the Mekong Delta. The area is extremely flat with an elevation typically ranging from +2 to +3 meters. Soil in the area is alluvial mostly washed and deposited from the Hau River during the flooding season.

10 The Works

The starting point of the Can Tho bridge project is at section Km2061 of NH 1 in Binh Minh District of Vinh Long Province. Having crossed through rice fields with some gardens and residential land the route then crosses Hau River downstream at a distance of about 3.2 km from the existing ferry. On the Can Tho side the route crosses through rice fields, gardens and residential land similar to the Vinh Long side and re-connects to NH.1 at section Km 2077 (the existing section) in the Chau Thanh District of Can Tho Province.

The overall length of the project is approximately 15.85 km

The proposed works comprise 5 packages:

- Approach road Vinh Long side
- Main bridge including elevated approach structures on both sides
- Approach road Can Tho side
- Infrastructure for resettlement zone Vinh Long side
- Infrastructure for 2 resettlement zones Can Tho side

Package 3 for the approach road on the Can Tho side comprises 7.69 km of dual carriageway road with an overall pavement width of 23.1m. For most of its length the road is elevated on embankment some 3m above the existing ground. Also included are one grade separated interchange, two single-span bridges and five multi-span bridges of 186m, 94m, 94m, 141m and 259m respectively. An area of approximately 21000m^2 is to be provided adjacent to the main bridge for car parking and future services facilities.

11 Briefing And Site Inspection

Representatives of each Tenderer will be required to attend a briefing on the project at the PMU My Thuan Project Offices, Ho Chi Minh City, Vietnam, commencing at 9.00 am. on ????, 2000, and a conducted site visit for an inspection of the bridge site at Can Tho on ????, 2000, commencing at 10.0 am. at the PMU-My Thuan Can Tho Bridge Project Site Office, near the southern approach to the site, close to Can Tho.

12 Program

The Time for Completion is within 50 months (Package 3) after the Commencement Date. It is anticipated that the Date of Acceptance of Tender will be ????2001.

LE LONG DINH
Director General

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT
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My Thuan Project Management Unit (My Thuan PMU)
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FORM OF ACKNOWLEDGMENT OF INVITATION TO TENDER

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

The Study Team of the Detailed Design on the Can Tho Bridge Project in the Socialist Republic of Viet Nam,
Nippon Koei Co., Ltd
C/o My Thuan Project Management Unit (My Thuan PMU),
127B Dinh Tien Hoang St,
Binh Thanh District,
Ho Chi Minh City,
Viet Nam

Attention Mr Koji Enomoto, Team Leader

Dear Sirs

Reference Can Tho Bridge Construction Project,
Package III
Acknowledgement of Invitation To Tender

With reference to the above, we acknowledge receipt of My Thuan PMU's Invitation to Tender dated ???? 2000, together with the associated documents.

We are/are not * accepting this Invitation to Tender.

Yours faithfully

Signed .....
Company .....
Date .....

* delete as applicable

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT
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PROJECT DEFINITION

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

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PROJECT DEFINITION

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

1. Background

National Highway No.1 is an arterial road running about 2,300 km through Viet Nam from China in the North to Nam Can in the South. The rehabilitation and improvement of Highway No.1 is the top priority project in the infrastructure development strategy of Viet Nam from now to the year 2010.

At present, road rehabilitation and improvement projects are being funded by the World Bank (WB) and the Asian Development Bank (ADB), and bridge improvement and rebuild projects are being funded by the Japan Bank for International Cooperation (JBIC).

There still remains one uncompleted large river-crossing in the southern section of Highway No.1: the Can Tho crossing of the Hau River. My Thuan Bridge across the other main river crossing has been under construction since June 1997, mainly with grant aid from the Government of Australia and was completed in May 2000.

Can Tho City is located 167 km southwest of Ho Chi Minh City, and is the largest and most important city in the Mekong Delta. The Can Tho ferry, which crosses the Hau River and connects the cities of Vinh Long and Can Tho, experiences heavy traffic and is a bottleneck on Highway No 1 between Ho Chi Minh City and Can Tho.

To meet the objectives of the infrastructure development strategy to ensure the smooth traffic flow along the whole length of highway No.1 before 2010 and to meet the transport demand for promoting socio-economic development of Cuu Long (Mekong) Delta and Indochina, it is necessary to construct the Can Tho Bridge. In the near future it is expected that a freeway from Ho Chi Minh City to Can Tho could be constructed and this would join with the bridge at Can Tho

2. Site Location

The total land area of Viet Nam is 325,490 sq. km, of which 75% is mountainous. Lowlands are relatively few, and predominantly distributed in the Mekong Delta in the southwest of the country. The Mekong Delta with an area of 39,600 sq.km covers about 12% of the country's total area.

Can Tho Province is situated in the central part of the Mekong Delta. The area is extremely flat with an elevation typically ranging from +2 to +3 meters. Soil in the area is alluvial mostly washed and deposited from the Hau River during the flooding season. The total area of the Province is approximately 2,970 sq. km, of which 83% is agricultural land. Forest areas account for only 1% of the total surface area.

3. Transport System

Transport modes in the Mekong Delta are inland waterways, roads, sea, and air. There is no railway. Roads serve as the major passenger transport means, and inland waterways serve as the major freight transport means.

The total length of the road network in the Mekong Delta is about 30,000 km. These roads are classified into national roads, provincial roads, and rural or feeder roads. Provincial and rural or feeder roads connect provincial capitals with district towns, or link the district town to the national roads. The current road network density is 0.77 km per sq. km. indicating that the road network is well spread over the delta.

There are many canals, waterways, and rivers in the delta. According to the Transport Infrastructure Survey in 1994, the navigable length is about 2,700 km out of 5,000 km of waterways. The density of the waterway network is 0.68 km per sq. km. Waterways are still functioning as a major means of transportation for economic and inhabitants' daily activities, due to the flooding in the rainy season which is linked to the traditional farming system in the delta.

The Can Tho port has been constructed with the status of an international port, and it can accommodate 5,000 DWT capacity vessels and handles some 300,000 tonnes per year.

4. Climate at the Site

The climate of Can Tho follows the typical monsoon weather pattern. Humid seasonal wind from the southwest prevails from May/June to October/November, and dry wind from the northeast prevails from November to March. These two seasons show a very distinctive rainy season, which is associated with heavy inundation. Data acquired from the Can Tho Observation Center has been analyzed, and the general weather patterns are summarized below;

The annual average temperature of the area is 26.7°C, with a maximum ambient of 37.7°C having a return period of 5 years and 40.5°C 100 years. The corresponding minima are annual average of 17.7°C with 16.6°C for a 5-year return and 13.8°C for a 100-year return. The temperature difference between wet season and dry season is relatively small. The relative average humidity ranges from 87% in the wet season to 77% during the dry season.

The approximate annual precipitation is generally 1750 mm. 90% occurs during the wet season with 15 to 20 rainy days per month

The characteristics of wind data in Can Tho is that the wind speed is generally around 2.5 ~ 3.5m/s though a strong southwest wind can prevail during the wet season from June to September due to the influence of the southwest monsoon. Typhoon gusts can occur

5. Hydrological and Hydraulic Conditions

The Mekong River separates into two near Phnom Penh, which is located about 70 km away from the Viet Nam-Cambodian border. These two river branches are referred to as the Hau and Tien rivers upon entering Viet Nam.

The width of the Hau River extends from 1.2 to 2 km from Can Tho city to the estuary. There is a high variation in the water flow in the rivers of the Mekong Delta due to well defined wet and dry periods. Generally, flooding in this area starts in July or August and extends up to November or December. The inundation occurs in the southern part of the delta, where the drainage facilities are poor and high water levels are logged for as long as five months.

Tides are semidiurnal and the monthly average tidal range at Can Tho varies from 1.15m to 2.25m. It is observed that the tidal changes are higher in the dry season (December to July) than during the flood season.

Discharge of the river is 18,000 – 28,000 m^3/sec in the wet season. The maximum discharge measured at the Can Tho Gauging Station was 27,900m^3/sec. in 1991.The minimum discharge recorded was 17,800m^3/sec in 1993. The highest recorded high water level was +1.84m in 1997 and the lowest high water level was +1.46m in 1955 Regular continuous water level is +1.10m (all levels to the State Datum) Lowest recorded low water level was –1.75m in 1986 and the highest recorded low water level was +0.10m in 1978.

The velocity of the river flow increases in the flood season, with a maximum of 2.5 m/sec recorded at the Can Tho station. In the dry season, sea water enters into the river, and a 0.5 m/sec reverse flow may be expected. Whirlpools can also be expected due to high changes in the local water flow.

Riverbed and bank erosion is predominant; scour is complicated, and quite deep.

6. Geotechnical Conditions

The Mekong Delta was formed from the sediment carried by rivers and deposited over a period of time.
The geomorphology of the area is a vast alluvial marsh and plain of about 1500km^2 intersected by numerous river tributaries which form a great water network. The region is a vast relic of Quaternary Lagoon. The present very wide low land of 1 to 2m in elevation on the riversides has been exposed as a result of most recent sea progression/ regression. The base rock layer is Cretaceous to Palaeogene granite and andesite, which also occur around the Cambodian border and the northern region of Ho Chi Minh City.

The semi basal layer consists of a marine sand of Dellibium assumed 20,000 years in geological age and the main geological type on the ground surface is alluvial clayey soil that corresponds to relatively recent lagoon and swamp sedimentation.

Bore holes, 70 to 150m deep drilled at the project site indicate that 9 main layers are present as follows: (from top to bottom)

- Layer Rd
  This is the recent riverbed sediment which consists of sand and clay. Especially on the surface of the riverbed a thin floating sand layer 1 to 2m thick is found which is now dredged for the purpose of construction usage.
- Layer C1
  On the land surface, gray color pure clay layer is distributed 10 to 30m in thickness. This is the clay formed by sedimentation during the period of Holocene marine progression.
  It is very soft, high plasticity with an N-value less than 5.
- Layer C2
  Continuous to the layer C1, in elevation minus -10 to- 40m, brownish gray colour clay lies about 30m in thickness. From viewpoint of the grain size, it consists of silty clay and partly bears a little quantity of sand.
  Its consistency is soft to medium stiff with an N-value of 10 to 15.
- Layer S/St
  This layer lies dominantly in the eastern side (Vinh Long.side) of the bridge site, at elevation level -10 to -50m. Fine sand and silt are mixed irregularly; possibly its sedimentary environment was an old river course or flooded area near the river.
  This layer is hard and dense with an N-value of 30 to 40.
- Layer St/C-1
  Reddish light brown silty clay with a little sand underlying in elevation -40 to -50m transitioning from clay layer C2. Reddish residual soil (weathered soil in land) is included in large quality, which suggest that the area became land in a previous time of sea regression.
  N-value varies from 15 to 50 in proportion to the sand quantity in the layer.
- Layer S1
  This layer lies in elevation -70 to -95m and consists mainly of brownish colour fine sand.
  Silt and/or clay are irregularly contained and it is assumed that the sedimentary environment was shallow sea and/or coastline.

This layer has an N-value 50 or more.

- Layer St/C-2
  This layer 15 to 30 m thick interline between sand layers (51 and 53) in elevation –95 to- 110m, and thickness increases toward the western side (Can Tho side).
  It consists of silty clay with light yellow, reddish brown color and it seems to be Fe, Al, Ca rich soil.
  The feature is hard soil in which semi-rock hardness is shown in some parts.
  This layer has an N-value which exceeds over 50 (very dense).
- Layer S2
  This lens like sand layer is about 10m thick, which exists in elevation –100 to –110 near the East River bank (HCMC side). It is interbeded between silty clay layer (St/C-2) according to borehole No.12. Yellowish and light brown colour fine sand is main soil type
  This layer has an N-value which exceeds over 50 (very dense).
- Layer S3
  This is distributed widely in elevation –110m below. It consists of homogeneous fine sand of marine origin with yellowish colour.
  This layer has an N-value which exceeds over 50 (very dense) through the whole layer.

7. Sources Of Materials

Natural materials for use in construction have been identified as follows:

Material Kind	Geological Name	Location (distance to site)
Concrete Aggregate	Andesite Granite	Nui Sap (120 km) Co To (130km) Bien Hoa (300 km)
Concrete Sand	River sand	Tan Chau (130km) Dong Nai (300 km)
Asphalt Aggregate & Base/Sub-base	Andesite Granite	Bien Hoa (300 km) Nui Sap (120 km)
Sand Mat and Drain	River sand River sand	Long Xuyen (50 km) Dredging Soc Trang (60 km) Dredging
Road Embankment (Sub-grade)	Clay Clay/Silt	Side Borrow River Dredging, Mixing with Long Xuyen or Soc Trang sand

Concrete Aggregate:
Bien Hoa Andesite and Nui Sap Granite are available for concrete aggregate (both coarse and fine crushed aggregates).
It is assumed that compressive strengths (qu) exceed 500 kgf/cm^2 in both types of rock. Flakiness of the crushed aggregate and the degree of alkaline reaction must be examined.

Concrete Sand:
The natural river sand of the Dong Nai is available for fine concrete aggregate. The degree of alkaline and salt content should be examined to avoid alkaline reactions in the concrete structure.

Asphalt Aggregate and Base/Sub-base:
For road pavement work, the above-mentioned andesite and granite are suitable materials for asphalt, base/sub-base course materials.

Sand Material for Earth Work:
The Long Xuan and Soc Trang river sands appear to be suitable for concrete casting, especially for PC concrete; however, they can also be used for earth work such as sand mat and/or drainage material.

Road Embankment Material (Sub-grade):
Since suitable borrow areas cannot be found close to the Project site, sub-grade material will have to be obtained by side borrow excavation. Moreover, the borrow soil type is a very soft and compressive clay, it may be expected that sand mixing will be required. Long Xuan and Soc Trang river sand might be used for this purpose. In case that side borrow is insufficient, the use of river-dredged material might be considered.

8. Project Outline

The starting point of the Can Tho bridge project is at section Km2061 of NH 1 in Binh Minh District of Vinh Long Province. Having crossed through rice fields with some gardens and residential land the route then crosses the Hau River. On the Can Tho side the route crosses through rice fields, gardens and residential land similar to the Vinh Long side and re-connects to NH 1 at section Km 2077 (the existing section) in the Chau Thanh District of Can Tho Province.

The overall length of the project is approximately 15.85 km

The proposed works comprise 5 packages:

- Approach road Vinh Long side
- Main bridge including elevated approach structures on both sides
- Approach road Can Tho side
- Infrastructure for resettlement zone Vinh Long side
- Infrastructure for 2 resettlement zones Can Tho side

Package 3 for the approach road on the Can Tho side comprises 7.69 km of dual carriageway road with an overall pavement width of 24m. For most of its length the road is elevated on embankment some 3m above the existing ground. Also included are one grade separated interchange, two single-span bridges and five multi-span bridges of 186m, 94m, 94m, 141m and 259m respectively. An area of approximately 21000m^2 is to be provided adjacent to the main bridge for car parking and future services facilities.

9. Specifications and Standards

The design is to be based on the Vietnamese Standards and the AASHTO Specification for Bridge Design with reference to Japanese Standards, especially for the proof check.
The major references are:

- AASHTO LRFD Bridge Design Specification, Second Edition 1998 published by AASHTO (American Association of State Highway and Transportation Officials).
- Reference will also be made to the AASHTO Standard Specification for Highway Bridge, Sixteenth Edition 1996.
- Highway Design Standards (TCVN-4054-1998), Viet Nam
- Specifications for Bridge Structures (2057/QD-KT-1979-Viet Nam) Highways Bridge Specification
- AASHTO Guide for Design of Pavement Structures 1993
- Japanese Highway and Bridge Standards
- Other related standards and specifications

10. Project Details

PACKAGE 3

Overall

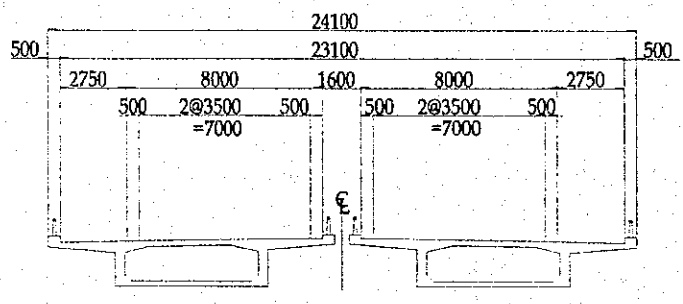
Bridge Location:	3.2 km downstream from the existing ferry line
Project Length	7,690 m
Construction Period:	50 months
Approach Road length:	7,690m
Intersections:	Diamond Type interchange (with National Highway No 91B) At grade Y type intersection
Service Area:	21,000m ^{2}

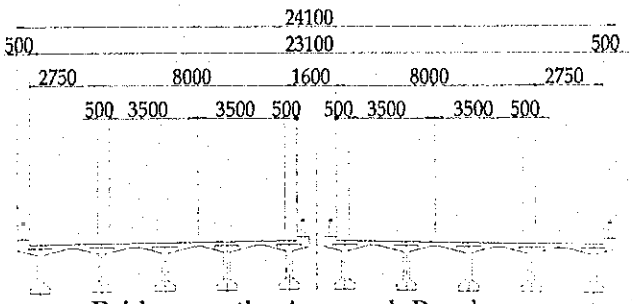
Bridges on the approach roads

The types of bridges on the approach road to the main bridge vary according to their spans:

Name of Bridge	Bridge Length (m)	Bridge Width (m)	Arrangement of Superstructure
Cai Tac Bridge No 1	185.90	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. 5 spans @ 37.0m
Cai Tac Bridge No 2	37.10	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. Single span 37.0m long
Cai Da Bridge	93.50	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. 3 spans: 28.0m + 37.0m + 28.0m long
Ba Mang Bridge	25.10	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. Single span 25.0m long
Cai Nai Bridge	93.50	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. 3 spans: 28.0m + 37.0m + 28.0m long
Ap My Bridge	140.90	24.1 2 No carriageways @ 10.75)	Prestressed precast concrete I beams. 5 spans: 28.0m + 25.0m + 37.0m + 2 No @ 25.0m long
Cai Rang Bridge	258.50	24.1 2 No carriageways @ 10.75)	Cast in place prestressed hollow concrete box girder, one per carriageway. 3 spans of 42.0m+75.0m+42.0m. Prestressed precast concrete I beams 31.0 and 37.0m +31.0m long respectively in side spans.
Interchange with NH 91B - Overbridge	100.10	31.0 (2 No carriageways @ 14.0)	Precast prestressed hollow slab. 4 spans @ 25.0m long each carriageway
Interchange with NH 91B Ramp D	93.50	7.50	Prestressed precast concrete I beams. 3 spans: 28.0m + 37.0m + 28.0m long

The typical cross-sections for the bridges in the approach roads are shown below:



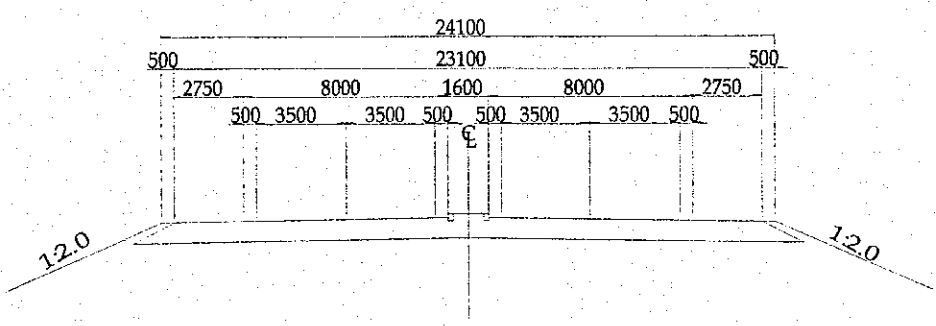


Bridges on the Approach Roads

Highway Design

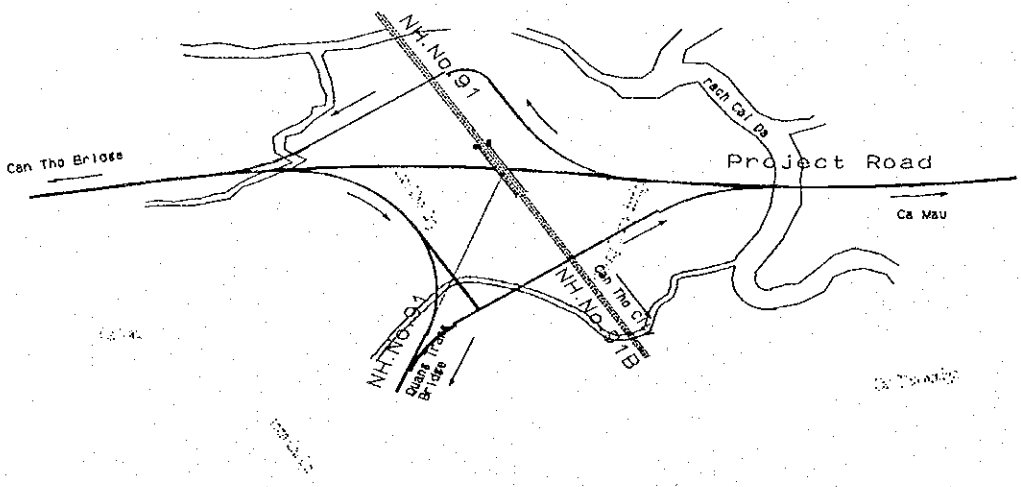
The highway design meets the requirements of the Highway Design Standards (TCVN-4054-1998, Viet Nam). The horizontal alignment is based on a design speed of 80km/hr. Minimum radii are 250m and Maximum super elevation is 6%.

Maximum gradients are 6%on the approach roads (though 4% for the approach portion of the main bridge)
The typical transverse cross-sections for the road embankments in the approach roads are shown below:



Road Embankment Section

The interchange is shown below:



Project Route and National Highway No.91&91B
Type: Diamond type with full interchange system

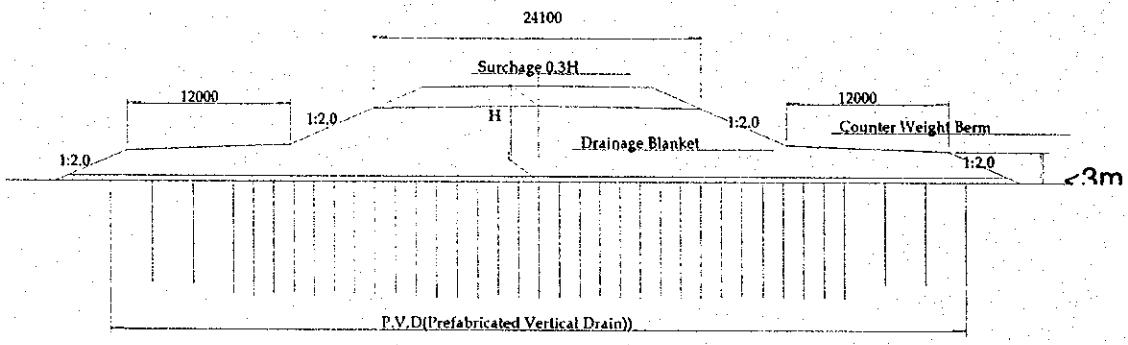
Pavement Design.

The design of the pavement is based on AASHTO, Guide for Design of Pavement structures-1993 and calls for a thickness of 750mm consisting of asphalt surface concrete, asphalt binder concrete, fine aggregate base course and crushed aggregate sub-base course.

Soft-ground treatment is expected:

- vertical drains for the drainage improvement.
- extra surcharge fills on the main embankment as pre-loading, normally 30% of embankment height.
- a fill zone on each side of the main embankment for lateral support and stability
- sand blanket below the embankment, if required

The typical embankment section with soft ground treatment is shown below:



Contractor's Construction Yards and Offices

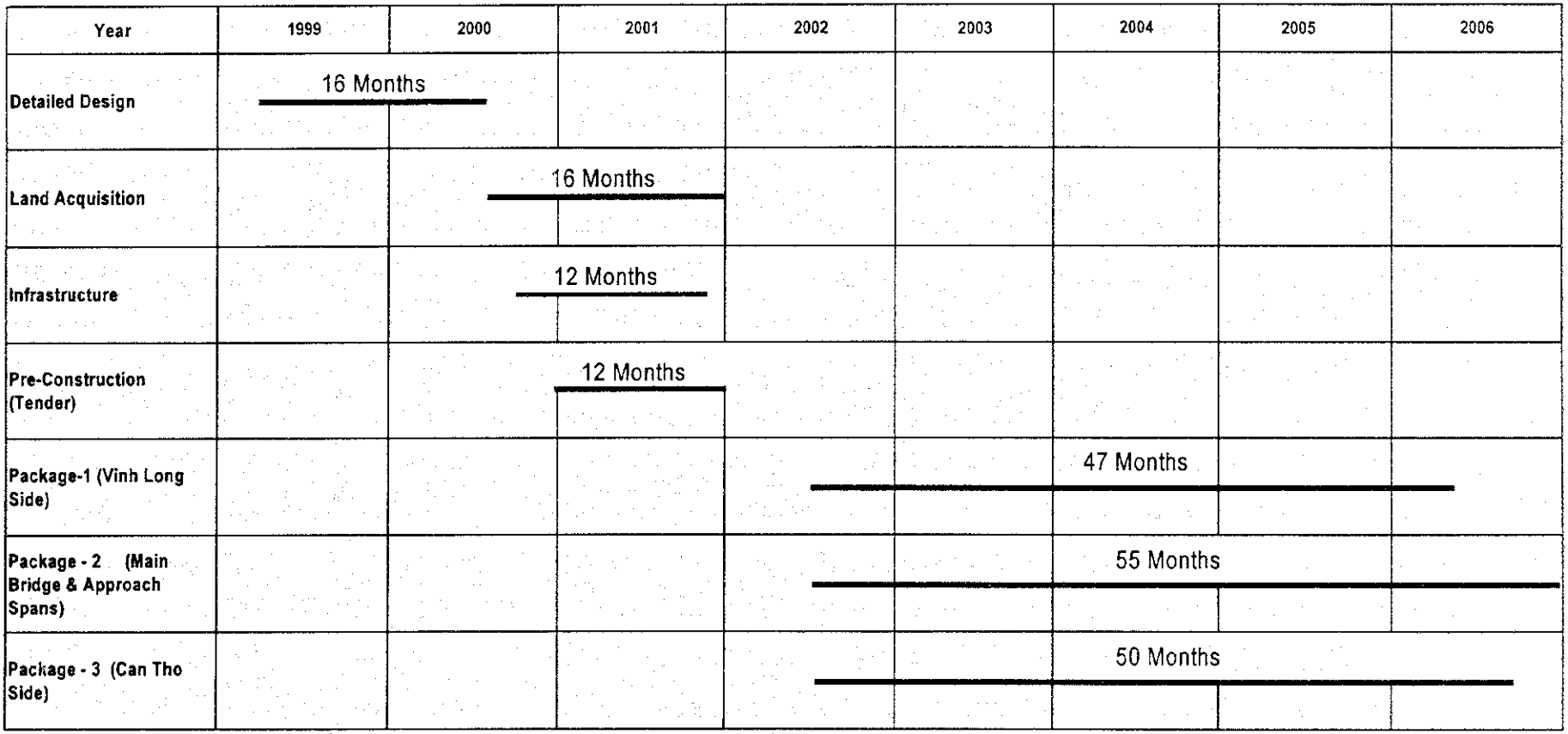
Production yard and office areas have been provided as below having given consideration to transportation of construction materials, production of the elements and offices.
Production yard and office areas have been provided as below having given consideration to transportation of construction materials, production of the elements and offices.

- Production Yard and Office, Package – 3 8.00 ha

11. Tentative Implementation Schedule

The proposed implementation schedule of the overall Can Tho Bridge Construction Project is shown overleaf. The overall program takes into consideration the period of pre-construction including tendering and shows the relative progress between the different packages.

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT - MY THUAN PROJECT MANAGEMENT UNIT
Can Tho Bridge Project – Prequalification of Contractors
SCHEDULE FOR ALL 3 PACKAGES



Tentative Construction Schedule of the Can Tho Bridge

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT
MY THUAN PROJECT MANAGEMENT UNIT
My Thuan Project Management Unit (My Thuan PMU)
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CONDITIONS OF TENDERING

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

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CONDITIONS OF TENDERING

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Package III

1 Nature Of Contract

The contract for which a tender is to be made in accordance with these Conditions of Tendering is partly a fixed price contract and partly a unit price contract based on Schedules of Prices and Rates for various work components.

The tender shall be for the completion of the whole of the works described and intended in the Tender Documents and shall be executed in accordance therewith.

2 Eligibility Of Tenderers

Only those tenderers which have been invited by My Thuan Project Management Unit (My Thuan PMU) will be permitted to tender.

Consortia or joint venture members and major subcontractors proposed in a tenderer's pre-qualification application must be retained in tendering. Failure to comply with this requirement will result in rejection of the tender.

In addition to the foregoing, tenderers shall not be one of the following:

- A firm or organisation which has been engaged by the Employer to provide consulting services for the preparation relating to procurement for, or implementation of, this project;

- Any association or affiliate (inclusive of parent firm) of a firm or organisation which has been engaged by the Employer to provide consulting services for the preparation relating to procurement for, or implementation of, this project;

- A firm or organisation who lends, or temporarily seconds, its personnel to a firm or organisation which has been engaged by the Employer to provide consulting services for the preparation relating to procurement for, or implementation of, this project, if those personnel would be involved in any capacity on the same project

3 One Tender per Tenderer

Each tenderer shall submit only one tender either by itself, or as a partner in a joint venture. A tenderer who submits or participates in more than one tender other than alternatives pursuant to Clause 24 below will be disqualified.

4 Source Of Funds

Funds for implementation of this project will be drawn partly from a Japan Bank for International Cooperation (JBIC) Loan Agreement and partly from the Ministry of Transport in Vietnam. Payments by the JBIC will be made only at the request of My Thuan PMU and on approval by the JBIC in accordance with the terms and conditions of the loan agreement and will be subject in all respects to the terms and conditions of that agreement

JBIC requires that tenderers and contractors as well as My Thuan PMU under contracts funded with JBIC Official Development Assistance (ODA) Loans and other Japanese ODA observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, JBIC;

- will reject a proposal for award if it determines that the tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question

- will recognize a contractor as ineligible, for a period determined by JBIC, to be awarded a contract funded with JBIC ODA Loans if it at any time determines that the contractor in executing another contract funded with JBIC ODA Loans or other Japanese ODA.

5 Language Of The Tender

The tender, as well as all accompanying documents, and any communication with My Thuan PMU or the Design Consultant, shall be in English. In case any printed literature accompanying the tender is in another language, it shall be supplemented by an officially certified translation in English. For the purposes of interpretation of the tender, the English translation shall prevail.

6 Tender Documents

The Federation Internationale Des Ingenieurs - Conseils (FIDIC) Conditions of Contract for Works of Civil Engineering Construction, Fourth Edition 1987, Reprinted 1988 with editorial amendments, Reprinted 1992 with further amendments, shall apply to this

Contract. These compromise General Conditions (Part I) including Forms of Tender and Agreement, and Conditions of Particular Application (Part II), which amplify and modify the General Conditions.

The Tender Documents issued by the My Thuan PMU consist of:

Volume 1

(a) Invitation to Tender and Form of Acknowledgment
(b) Project Definition
(c) Conditions of Tendering
(d) Appendix A to Conditions of Tendering, Information Made Available by My Thuan PMU

Schedule CoT - 1	Working Areas and Accommodation Areas
Schedule CoT - 2	Survey Data
Schedule CoT - 3	Geotechnical Data
Schedule CoT - 4	Environmental Data

(e) Appendix B to Conditions of Tendering, Major Points of Conformance
(f) Form of Tender
(g) Appendix to Form of Tender
(h) Schedules to Form of Tender. Information to be completed by Tenderer

Tender Schedule TS - 1	Management Systems and Project Organisation
Tender Schedule TS - 2	Curriculum Vitae of Proposed Key Staff
Tender Schedule TS - 3	Details of Staff Labour and Training
Tender Schedule TS - 4	List of Proposed Contractor's Equipment
Tender Schedule TS - 5	Proposed Construction Working Hours
Tender Schedule TS - 6	Details of Proposed Engineering Srevices
Tender Schedule TS - 7	Details of Any Joint Venture, Joint Participation or Consortium Partners
Tender Schedule TS - 8	Details of Major Subcontractors and Suppliers
Tender Schedule TS - 9	Sources of Materials
Tender Schedule TS - 10	Detailed Proposed Program for Construction
Tender Schedule TS – 11	Detailed of Proposed Construction Method Statement
Tender Schedule TS - 12	Schedule of Prices & Rates
Tender Schedule TS - 13	Schedule of Rates for Daywork
Tender Schedule TS - 14	Schedule of Rates for Overheads and Profit
Tender Schedule TS - 15	Estimated Monthly Cash Flow
Tender Schedule TS - 16	Details of Insurances
Tender Schedule TS - 17	Details of Proposed Quality System
Tender Schedule TS - 18	Safety Plan
Tender Schedule TS - 19	Environmental Management Plan
Tender Schedule TS - 20	Details of Existing Services
Tender Schedule TS - 21	Details of Contractor's Compound

Tender Schedule TS - 22 River and road traffic management Plan
Tender Schedule TS - 23 Tender Security

(i) Form of Agreement
(j) Conditions of Contract Part I
(k) Conditions of Contract Part II
(l) Forms of Guarantees
Advance Payment Security
Performance Security

Volume 2

(a) Technical Specifications

Volume 3

(a) Drawings

Volume 4

(a) Additional Geotechnical and Survey Information

(b) Other additional information eg
Feasibility Study and Annexure
Basic Design Report
Final Design Report
Final Report on River Studies
Final Report on Wind Tunnel Tests
Report on Land Resumption and Survey

The documents issued to Tenderers do not include a copy of the General Conditions of Contract. Tenderers shall make their own arrangements for obtaining a copy, which is available from FIDIC via its web site: *http://www.fidic.org/*

No explanation or amendment to the Tender Documents shall be recognised unless in the form of a written addendum issued by the My Thuan PMU or on its behalf by the Design Consultant identified in the Letter of Invitation

Each Tenderer will be supplied free of charge with 2 copies of all Tender Documents, including drawings. Further copies of Tender Documents shall only be supplied to a tenderer upon payment of US $ 500.00 per copy to My Thuan PMU.

7 Information Made Available

The information made available by My Thuan PMU in Schedules CoT 1, 2, 3 and 4 in Appendix A to Conditions of Tendering and any additional geotechnical, survey or other information provided with these Tender Documents is made available for the information of the tenderer and is not intended to form part of the Contract except as specifically referred to in the Tender Documents.

My Thuan PMU does not warrant, guarantee or make any representation about the accuracy or adequacy of such information or data which does not in any way purport to accurately represent complete survey, sub-surface, environmental or other conditions likely to be encountered during the performance of the Works.

The Tenderer shall be fully responsible for the verification of the information made available to him and for any interpretation or conclusion made by himself in regard to site conditions based on it and he acknowledges that such information or data will not form part of any Contract and that My Thuan PMU will not be liable upon any claim by the contractor appointed to execute the Contract arising out of or in connection with the information or data.

8 Special Legislation

The Government of Vietnam intends to enact a project-specific regulation prior to the award of the Contract. In relation to matters within the jurisdiction of the Government of Vietnam, the regulation will seek to facilitate construction of the project by:

- streamlining the issue of necessary permits, licences approvals;
- simplifying import and export arrangements, customs and immigration requirements;
- co-operating in providing site access and facilitating transport;
- assisting in the engagement of labour; and
- clarifying taxation arrangements.

The Employer does not, however, warrant the regulation will be enacted by the closing date for tenders, and Tenderers shall ascertain for themselves the status of the regulation prior to submitting tenders, and price their tender accordingly.

Tenderers should consult the Vietnamese Ministry of Transport and the My Thuan PMU for further information regarding the proposed Regulation.

9 Tenderer To Inform Himself Fully

Each Tenderer shall:

- Obtain and acquaint himself with all conditions and other all information relevant to a tender conforming to the Tender Documents.

- Examine the Tender Documents, the site and its surroundings, and any other information made available to the Tenderer in writing by the My Thuan PMU or the Design Consultant for the purpose of tendering.

- Examine all information relevant to the risks, contingencies, and other circumstances having an effect on his tender and which is obtainable by the making of reasonable enquiries.

- Satisfy himself as to the correctness and sufficiency of his tender and that his price covers the cost of complying with all obligations of the tender documents and of all matters and things necessary for the due and proper performance and completion of the work described in the Tender Documents (See Clause 12 of the Conditions of Contract).

10 Discrepancies, Errors And Omissions In Tender Documents

Should a Tenderer find any discrepancy, error or omission in the Tender Documents, he shall notify the Design Consultant in writing thereof at the address given in the Invitation to Tender.

11 Clarification Of Tender Documents

If a Tenderer is in doubt as to the true meaning of any part of the Tender Documents he shall seek clarification from the Design Consultant, at the address given in the Invitation to Tender.

12 Addenda

My Thuan PMU, at its discretion or arising out of a notification made, or a clarification requested, or other query by a prospective tenderer, may issue an addition or amendment to any aspect of the Tender Documents. Such addition or amendment will be in the form of an Addendum to the Tender Documents which will clarify or modify the Tender Documents and will form part of the Tender Documents.

In the case of an addendum clarifying an enquiry from a tenderer the Addendum will identify the enquiry as well as respond to it. The identity of the tenderer initiating the enquiry will not be made known.

Copies of each Addendum will be distributed to every tenderer who has accepted the Letter of Invitation. Recipients shall acknowledge receipt of each Addendum by signing and returning to the Design Consultant the receipt form provided with the Addendum.

All Addenda in response to enquiries received from tenderers at the latest 28 days before the date for submission of tenders will be issued at the latest 21 days before the date for submission of tenders

13 Briefing And Site Inspection

Representatives of each Tenderer will be required to attend a briefing on the project at the PMU My Thuan Project Offices, Ho Chi Minh City, Vietnam, commencing at 9.00 am. on the date given in the Invitation to Tender, and a conducted site visit for an inspection of the bridge site at Can Tho on the following day, commencing at 10.0 am. at the PMU-My

Thuan Can Tho Bridge Project Site Office, near the southern approach to the site, near Can Tho.

Formal confirmation of matters raised and answered during the briefing and conducted site visit will be prepared and issued as an Addendum to the Tender Documents.

Tenderers are advised that attendance at the meeting and site inspection by the Tenderer or a competent representative is a condition precedent to the submission of a tender.

A Tenderer may inspect the site at any other time, but the Project Manager and the Design Consultant will only be available for the accompanied site inspection.

To gain access to the site for further visits to inspect the site, or for the carrying out of any trials or for obtaining any samples from the site, permission shall be sought through the Design Consultant, who will make the necessary arrangements for access with the Vietnamese authorities.

It is a condition that any persons, firms or companies visiting the site at any time will be responsible for, and will release and indemnify My Thuan PMU and the Design Consultant and their servants and agents from and against, all liabilities in respect of personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused (whether by the act or neglect of the My Thuan PMU or the Design Consultant or their servants or agents or not) which but for such visit would not have arisen.

14 Additional Queries

Any queries not raised at the briefing and joint site inspection shall be addressed to the Design Consultant at the address given in the Invitation to Tender.

Such queries will be answered by means of Addenda to the Tender Documents.

15 Completion Of Tender Documents

The tender itself shall be signed by a person duly authorized to bind the tenderer and whose power of attorney indicating such authority shall be submitted with the tender. This power of attorney shall be certified by a notary public and, for foreign tenderers, by the Vietnamese Embassy in the country concerned.

The person who signed the tender shall also initial every page of the submission.

Each tender shall contain an address, telephone number and fax number in Vietnam for service of any notice necessary or required to be, or which may be, served on, or given to, the tenderer in connection with his tender.

Any correction, erasure or overwriting in the tender submitted shall be duly initialled by the person who signed the tender.

In the event of there being any discrepancy between the original and any of the duplicates, the original shall prevail.

No unauthorized alteration shall be made to the Form of Tender, Schedule of Prices or the Schedules of Rates or to any other of the Tender Documents issued by My Thuan PMU. If any such alteration is made or if the Schedules of Prices and Rates are not properly completed or if the Conditions of Tendering are not fully complied with, the tender may be rejected.

16 Tender Submitted By A Joint Venture Or Consortium

A tender submitted by a group of two or more firms forming a joint venture or consortium shall be signed by each member firm.

Member firms of such groups shall be jointly and severally responsible for the performance of all obligations and the discharge of all liabilities under the Contract of all the members of the joint venture or consortium.

17 Tender Submitted By A Subsidiary Company

A tender submitted by a tenderer who is related or subsidiary to a parent or holding company shall include a guarantee and indemnity for the performance of all of his obligations and the discharge of all of his liabilities under the Contract from his ultimate holding company.

18 Procedure For Submission Of Tenders

Tenders shall be submitted in 4 identical copies, comprising of an original (marked ORIGINAL) and 3 duplicates (each marked DUPLICATE) enclosed in a single (or more if absolutely necessary), closed and sealed package which shall be addressed and endorsed in accordance with the requirements given in the Invitation to Tender.

Tenders shall be delivered to the tender box at the required address by hand only so as to arrive before 09.00 hrs on the date stated in the Letter of Invitation. Tenders received after this time will be returned unopened. A tender which gets opened prior to the official time due to incorrect markings may be disqualified.

19 Documents To Be Submitted

The following documents shall be duly completed and submitted and shall form part of the Tender proposal. Wherever possible they shall be assembled in the sequence shown below and be referenced by the same numeric characters.

(a) Tender Security as specified in these Conditions of Tendering
(b) Form of Tender
(c) Appendix to Form of Tender

(d) Schedules to Form of Tender

Tender Schedule TS - 1	Management Systems and Project Organisation
Tender Schedule TS - 2	Curriculum Vitae of Proposed Key Staff
Tender Schedule TS - 3	Details of Staff Labour and Training
Tender Schedule TS - 4	List of Proposed Contractor's Equipment
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Tender Schedule TS - 20	Details of Existing Services
Tender Schedule TS - 21	Details of Contractor's Compound
Tender Schedule TS - 22	River and road traffic management Plan
Tender Schedule TS - 23	Tender Security

(e) Form of Agreement

(f) Conditions of Contract Part I

(g) Conditions of Contract Part II

(h) Forms of Guarantees

Advance Payment Security

Performance Security

(i) Technical Specifications

(j) Drawings

(k) All Tender Addenda issued by My Thuan PMU.

(l) Power(s) of Attorney for person(s) signing the tender duly certified as required by these Conditions.

(m) Any other details required in the Tender Documents or any supporting literature or information which may be appropriate.

Acceptance by My Thuan PMU of any part of the information submitted as Schedules to the Form of Tender should not be taken as general approval of their suitability for the works.

The attention of tenderers is drawn specifically to the requirement for tenderers to submit a detailed construction program, method statement, list of Contractor's Equipment, organization chart, curricula vitae of key staff and estimated labour force all of which demonstrate that the tenderer has a clear understanding of the issues involved and that he will provide the resources necessary for the expeditious execution of the works.

In particular the method statement shall describe, in detail, how the tenderer would advance the open caissons to the required toe level if this cannot be achieved by conventional driving.

Tenders which fail to demonstrate that the tenderer has a clear understanding of the issues involved and that he will provide the personnel, Contractor's Equipment necessary for the expeditious execution of the Works shall be deemed to be non-conforming.

Tenderers tendering for this Contract together with contracts for other packages in the Can Tho Bridge Construction Project shall indicate on the Form of Tender which other packages are being tendered for together with any discounts being offered for the award of more than one contract.

20 Currencies Of Tender

Rates and prices in the Tender shall be quoted in the following currencies:

- Local Currency - expenditures in performance of the Contract to be incurred in Viet Nam shall be expressed and will be payable in Vietnamese Dong.

- Foreign Currency - expenditures in performance of the Contract to be incurred outside Viet Nam shall be expressed in and will be payable in Japanese Yen.

The currencies of account of the contract for the works are to be the Vietnamese Dong and the Japanese Yen. All payments, deductions, adjustments or other sums are to be measured or calculated in each currency as set out in the Schedule of Prices for the Construction of Fixed Price Works and the Schedule of Rates for the Construction of Re-measured Works or as otherwise incurred. There shall be no transfer of sums between one currency and the other and there shall be no adjustment to the amount measured or calculated in respect of any change in the exchange rate between the two currencies.

21 Schedule of Prices for the Construction of Fixed Price Works

The Tenderer shall make his own assessment of the scope of work included in the fixed price part of the Contract Price and shall verify that the estimated quantities in the Schedule of Prices for the Construction of Fixed Price Works are correct.

The Tenderer shall be deemed to have determined and verified the quantities and items of work with the Drawings and Specification prior to submitting his Tender and, if the Tenderer remains not satisfied with the quantities or items listed in the Schedule of Prices for the Construction of Fixed Price Works at the time of submitting his Tender, he shall

insert in the Schedule any such items and quantities as computed by him for which he wishes to enter a price to cover the completion and proper performance of the Contract.

The fixed price part of the Contract Price shall be fixed prior to award of the Contract and the quantities making up this price will not be subject to remeasurement.

22 Schedule of Rates for the Construction of Re-measured Works

The Tenderer shall not adjust or modify the item descriptions or the quantities in the Schedule of Rates for the Construction of Re-measured Works. These quantities are estimates only and shall be remeasured in accordance with the provisions of the Contract.

Tenderers shall fill in rates against each item in the Schedule of Rates for the Construction of Re-measured Works. Items against which no rate or price is entered shall be deemed to be covered by other prices or rates in the Schedule of Prices for the Construction of Fixed Price Works or the Schedule of Rates for the Construction of Re-measured Works.

23 Rates And Prices

The items set forth in the Schedule of Prices for the Construction of Fixed Price Works and the Schedule of Rates for the Construction of Re-measured Works and the rates and amounts entered therein shall, except insofar as may be otherwise expressly provided in the contract, be deemed to cover all the Contractor's liabilities and obligations and all matters and things manifestly and contingently necessary for the proper construction and completion of the Works as specified in or reasonably to be inferred from the Contract. No further payment shall be made in respect of anything described in the Contract for which apparently no corresponding item is given in the Schedule of Prices and the cost thereof shall be deemed to be included in the rates and amounts as aforesaid.

24 Alternative Tenders

Tenderers are required to submit a tender for the works exactly as specified in the tender documents issued by My Thuan PMU.

Tenderers may submit technical alternatives for components, or parts, of the works provided that they offer cost and/or time benefits to the My Thuan PMU, are shown to be technically acceptable, are of a satisfactory visual form and conform to the design requirements, and receive the approval of, My Thuan PMU.

Only technical alternatives, if any, of the lowest evaluated fully conforming tenderer will be considered.

Tenderers wishing to offer technical alternatives shall provide all information necessary for a complete evaluation of the alternative including drawings, design calculations, technical specifications, breakdown of prices and rates and proposed construction methods.

25 Validity Of The Tenders

Tenders shall be valid for the period stated in the Letter of Invitation counted from the date of opening of tenders.

My Thuan PMU may solicit a tenderer's consent to an extension of the period of tender validity. The request and the responses thereto shall be made in writing (by letter or fax) and, if the tenderer agrees to the extension request, the validity of the tender security shall also be similarly extended. A tenderer may refuse the request without forfeiting his tender security but a tenderer granting the request will not be required or permitted to modify his tender.

26 Tender Security

Tenderers shall furnish a tender security for the amount specified in the Letter of Invitation. The Tender Security shall be inserted in its own envelope and enclosed with the tender. It shall be in the form of a bank guarantee in Japanese Yen by any bank registered in Viet Nam and acceptable to My Thuan PMU. It shall conform to the Form of Tender Security shown in these Tender Documents and shall remain in force and effect until the date 30 days after the expiry of the tender validity period.

Any tenderer who fails to submit a fully conforming tender security will be rejected as being non-responsive.

Tender securities of unsuccessful tenderers will be returned promptly after expiry of the above-mentioned period including any extensions thereof.

27 Clarification Of Tenders

In the evaluation and examination of tenders, My Thuan PMU may seek clarification from tenderers. Tenderers shall provide only the clarification asked for and shall not in any way cause a change in the substance of the tender or in the prices quoted.

28 Evaluation And Comparison Of Tenders

The objective in evaluating Tenders is to obtain the best value for money and not necessarily the lowest price. In addition to the consideration of price and compliance with the Tender Documents, the following factors will be taken into consideration in the assessment of Tenders.

- technical, management, physical and financial resources
- subcontract, labour and material supply proposals
- extent of local contractor participation
- current commitments
- record of previous performance on projects both in Viet Nam and overseas
- reputation within the industry
- extent of construction experience on similar projects

- ability to perform within contract time
- financial capacity
- quality system proposals and QA record.
- industrial relations, safety performance and contract claims record
- pricing structure of tender schedules
- extent of minimisation of risk to the Government of Viet Nam

Prior to making the detailed evaluation of tenders, My Thuan PMU will determine the substantial responsiveness of each tender to the tender documents issued by My Thuan PMU. My Thuan PMU's determination of a tender's responsiveness will be based on the contents of the tender itself without recourse to extrinsic evidence though, if appropriate, My Thuan PMU may seek written clarification from a tenderer on any point of doubt. In this case, the requirements of Clause 27 above shall be noted and adhered to by tenderers when giving their reply.

A tender which does not conform to the major points of conformance listed in Appendix B to these Conditions of Tendering or a tender which contains unacceptable or inadequate details will be determined as substantially non-responsive and will be rejected by My Thuan PMU, whose decision to determine responsiveness shall be regarded as final. My Thuan PMU may waive any minor informality, non-conformity or irregularity in a tender which does not constitute a material deviation.

Tenders which do conform to the major points of conformance listed in Appendix B will be evaluated technically to determine the tenderer's response to the factors identified above.

My Thuan PMU will examine the schedules of prices and rates to determine whether these are complete and whether any computational errors have been made. My Thuan PMU will also examine all documents to determine whether these have been properly signed and are generally in order.

Arithmetical errors in the Schedule of Prices for the Construction of Fixed Price Works will be rectified on the basis that if there is a discrepancy between the unit price and the "total price" obtained by multiplying the unit price and quantity, the "total price" shall prevail and the "unit price" shall be corrected. If there is a discrepancy between the "total prices" (resulting from multiplication of the unit price and quantity) and the summation of these and/or the total entered as the fixed price part of the tender total in the Summary of the Schedule of Prices, the fixed price part of the tender total shall prevail and the "total prices", and the unit prices as appropriate shall be corrected.

Arithmetical errors in the Schedule of Rates for the Construction of Re-measured Works will be rectified on the basis that if there is a discrepancy between the unit price and the "total price" obtained by multiplying the unit price and quantity, the unit price shall prevail and the "total price" shall be corrected. If there is a discrepancy between the "total prices" (resulting from multiplication of the unit price and quantity) and the summation of these and/or the tender total entered in the Schedule of Rates, the "total prices" shall prevail and the summation or tender total shall be corrected.

If there is a discrepancy between words and figures, the amount in words will prevail.

As stated in Clause 20 of these Conditions of Tendering the currencies of account of the contract for the execution of the works are to be Vietnamese Dong and Japanese Yen. For the purpose of comparison of tenders, however, tender prices stated by the tenderer will be converted by My Thuan PMU to a single total in Vietnamese Dong using the Cash/TC Buying exchange rate of the Vietcombank (Ha Noi Branch) as most recently published by the Bank at the time of opening of tenders.

In the evaluation of tenders, account will be taken of the information provided by the Tenderer in all the Schedules to the Form of Tender.

29 Notification Of Award

The successful tenderer will be notified by facsimile or registered letter that his tender has been accepted. If, after receipt of such notification, he fails to complete the formalities stated in Clauses 29 and 30 hereinafter within the stipulated time, or such extended time as may be given by My Thuan PMU, his tender security shall be forfeited. In this case My Thuan PMU may, if appropriate, issue such a notification to another tenderer.

30 Performance Security

The successful tenderer shall obtain and provide to My Thuan PMU a security for his proper performance of the contract within 28 days after the date of the Letter of Acceptance, in accordance with Clause 10 of the Conditions of Contract.

31 Signature Of Contract

The successful tenderer shall sign a formal contract in the form included in this Volume 1 of these documents within 28 days after the date of the Letter of Acceptance. This contract shall incorporate all agreements between the parties.

32 Cost Of Tender Preparation And Submission

Each tenderer shall be entirely responsible for and shall bear all costs associated with the preparation and submission of his tender and My Thuan PMU shall have no responsibility or liability in this respect, irrespective of whether the tender is awarded or canceled or awarded to a tenderer of My Thuan PMU's choice.

33 Right To Accept Or Reject Any Or All Tenders

My Thuan PMU shall not be bound to accept the lowest or any tender.

My Thuan PMU reserves the right to accept or reject any tender, and to annul the tendering process and reject all tenders at any time prior to award of a Contract without thereby

incurring any liability to the affected tenderer or tenderers or any obligation to inform the affected tenderer or tenderers of the grounds for My Thuan PMU's action.

A tenderer whose tender is not accepted shall have no recourse against My Thuan PMU nor receive any indemnity whatsoever. Under all circumstances, My Thuan PMU reserves the right to make the final decision on the selection of a successful tender or to reject all tenders. No claims shall be made by any tenderer against My Thuan PMU upon such action.

34 Interference In Evaluation

While tenders are under consideration, tenderers and their representatives or other interested parties shall refrain from contacting by any means any personnel or representative of My Thuan PMU on matters relating to the tenders under consideration, except in direct response to a written enquiry initiated by My Thuan PMU. Any effort to unduly influence My Thuan PMU shall disqualify the tenderer.

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Appendix A - Information Provided by My Thuan PMU

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INSTRUCTIONS TO TENDERERS
APPENDIX A INFORMATION PROVIDED BY My Thuan PMU

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Schedule CoT - 1 Working and Accommodation Areas

Details of the Contractor's working areas both on shore and on the Hau River, and the Contractor's accommodation areas are provided as separate documents with these Tender Documents

The attention of tenderers is drawn to the constraints noted in this documentation.

Tenderers should also note the limits on movement and mooring of marine Contractor's Equipment set out in the Special Conditions of Contract

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CONDITIONS OF TENDERING
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Can Tho Bridge Construction Project
Under JBIC Loan Agreement
Package III

Schedule CoT - 2 Survey Data

Topographic and hydrographic information is provided as separate documents with these Tender Documents, "Additional Geotechnical and Survey Information."

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- The Tenderer shall be fully responsible for the verification of the information made available to him and for any interpretation or conclusion made by himself in regard to site conditions based on it and he acknowledges that such information or data will not form part of any Contract and that My Thuan PMU will not be liable upon any claim by the contractor appointed to execute the Contract arising out of or in connection with the information or data.

- The Tenderer shall satisfy himself as to the correctness and sufficiency of his tender and that his price covers the cost of complying with all obligations of the tender documents and of all matters and things necessary for the due and proper performance and completion of the work described in the Tender Documents

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT
MY THUAN PROJECT MANAGEMENT UNIT
My Thuan Project Management Unit (My Thuan PMU)
127B Dinh Tien Hoang St, Binh Thanh District Ho Chi Minh City - Viet Nam
Tel: (84 - 8) - 841 0088; Fax: (84 - 8) – 841 1872

CONDITIONS OF TENDERING
APPENDIX A INFORMATION PROVIDED BY My Thuan PMU

Can Tho Bridge Construction Project
Under JBIC Loan Agreement
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Schedule CoT - 3 Geotechnical Data

Geotechnical information is provided as separate documents with these Tender Documents, "Additional Geotechnical and Survey Information."

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Schedule CoT - 4 Environmental Data

Information on climatic, flood and tidal data for the site is given below:

Wind

Wind data for the probability and average wind velocity in Can Tho for each month are reproduced below.

MONTHLY PROBABILITY AND AVERAGE VELOCITY OF WIND EACH DIRCTION AT CAN THO

Month	Direction	North	North-East	East	South-East	South	South-West	West	North-West	Wind-less
1	P(%)	7.3	9.0	25.3	20.0	1.2	0.8	0.9	0.9	34.6
	V(m/s)	2.7	2.6	2.8	2.6	1.7	2.6	1.8	2.3	0.0
2	P(%)	3.0	5.2	33.0	35.6	1.6	0.2	0.7	0.4	20.3
	V(m/s)	2.8	2.8	2.6	3.0	1.9	2.5	2.0	2.3	0.0
3	P(%)	0.3	1.6	22.7	34.7	7.0	1.4	0.4	0.4	31.5
	V(m/s)	1.7	3.2	3.2	2.7	2.2	2.2	3.2	0.2	0.0
4	P(%)	0.4	1.3	17.7	28.9	9.7	3.0	1.0	0.1	37.9
	V(m/s)	2.0	2.4	3.1	2.5	1.9	2.0	2.8	4.0	0.0
5	P(%)	1.3	2.6	6.6	12.1	12.8	12.7	7.6	0.8	43.5
	V(m/s)	2.9	2.4	2.8	2.4	1.7	2.4	3.4	4.4	0.0
6	P(%)	0.6	0.4	1.4	2.6	7.7	23.4	23.7	2.3	37.9
	V(m/s)	2.5	2.2	2.0	1.7	1.8	2.5	3.5	3.3	0.0
7	P(%)	0.5	0.2	0.0	1.2	8.6	29.0	23.8	2.0	34.7
	V(m/s)	2.0	5.0	0.0	2.3	1.9	2.5	3.4	3.0	0.0
8	P(%)	0.3	0.2	0.0	0.3	2.8	32.8	30.9	2.3	30.4
	V(m/s)	17.0	3.0	0.0	2.7	2.1	2.9	3.6	4.3	0.0
9	P(%)	1.6	1.3	1.8	1.9	4.3	19.1	22.3	2.8	44.9
	V(m/s)	1.8	2.3	2.4	2.0	1.9	2.5	3.1	2.9	0.0
10	P(%)	9.0	4.4	7.5	3.2	2.8	7.7	9.4	7.6	48.4
	V(m/s)	2.9	2.6	2.5	2.3	2.2	2.1	2.8	2.8	0.0
11	P(%)	18.7	13.0	14.0	4.3	1.2	0.5	1.5	4.4	42.4
	V(m/s)	2.9	2.7	2.5	2.0	1.8	2.2	1.7	2.7	0.0
12	P(%)	19.9	12.5	11.7	6.7	0.4	0.2	0.3	3.6	44.7
	V(m/s)	2.8	2.6	0.5	2.5	1.5	1.0	2.7	2.4	0.0

Rain

Rainfall intensity and monthly rainfall figures for Can Tho are reproduced overleaf.

SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT - MY THUAN PROJECT MANAGEMENT UNIT
Can Tho Bridge Project – Conditions of Tendering
SCHEDULE Cot – 4 ENVIRONMENTAL DATA

Interval	10min		30min		60min		90min		120min		240min		480min		720min		1440min		1 day (19h-19h)	
Year	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date			Value	Date
1.978	15.9	4-Jul	40.3	20-Sep	67.0	20-Nov	71.7	20-Nov	83.6	20-Nov	89.4	20-Sep	90.0	20-Nov	90.0	20-Nov	95.5	19-Nov	91.2	20-Sep
1.979	15.0	23-Aug	29.0	23-Aug	34.9	8-Oct	49.4	2-Sep	79.4	2-Sep	49.4	2-Sep	49.4	2-Sep	49.4	2-Sep	55.2	20-Jun	48.4	2-Sep
1.980	20.1	24-Jun	41.3	23-May	67.5	23-May	72.3	23-May	77.4	23-May	86.1	9-Jun	89.7	9-Jun	90.6	9-Jun	90.6	9-Jun	90.4	9-Jun
1.981	15.3	29-Oct	26.9	12-Oct	36.8	12-Oct	54.9	29-Oct	57.6	29-Oct	63.9	29-Oct	70.0	31-Oct	70.0	31-Oct	71.1	21-Sep	69.7	11-May
1.982	30.5	2-May	52.4	2-May	70.4	28-Sep	80.6	28-Sep	82.7	28-Sep	83.0	28-Sep	83.0	28-Sep	83.0	28-Sep	97.3	29-Sep	83.6	28-Sep
1.983	32.6	16-Sep	60.8	16-Sep	94.5	16-Sep	112.2	16-Sep	113.3	16-Sep	116.3	16-Sep	117.8	16-Sep	117.8	16-Sep	117.8	16-Sep	7.8	16-Sep
1.984	22.9	26-Apr	49.8	26-Apr	61.2	26-Apr	61.2	26-Apr	62.2	26-Apr	65.9	26-Apr	67.6	26-Apr	68.7	26-Jun	70.9	9-Oct	665.0	26-Apr
1.985	20.3	18-Nov	36.3	4-Jun	57.3	4-Jun	61.8	4-Jun	64.0	4-Jun	70.2	23-May	70.5	23-May	80.6	4-Jun	82.4	4-Jun	77.5	4-Jun
1.986	21.3	27-Jun	48.6	27-Jun	74.1	27-Jun	80.0	27-Jun	86.4	27-Jun	102.4	27-Jun	115.5	1-Jan	118.3	1-Nov	123.9	1-Nov	116.4	2-Jan
1.987	24.9	15-Jun	35.6	25-Nov	47.6	25-Nov	52.6	7-Oct	52.7	7-Oct	57.8	7-Jan	57.8	7-Oct	61.5	7-Oct	79.1	13-Sep	67.3	7-Oct
1.988	18.1	1-Oct	35.0	4-Sep	52.2	21-Oct	56.6	21-Oct	60.4	21-Oct	67.6	21-Oct	80.6	2-Oct	80.9	21-Oct	81.2	2-Oct	73.4	22-Oct
1.989	27.8	15-Jul	59.0	15-Jul	78.7	15-Jul	80.8	15-Jul	82.1	15-Jul	82.4	15-Jul	82.5	15-Jul	82.5	15-Jul	104.5	15-Jul	82.2	15-Jul
1.990	19.1	21-Jun	35.2	4-Aug	46.1	4-Aug	53.1	4-Aug	55.7	4-Aug	64.5	4-Aug	66.3	4-Aug	66.6	4-Aug	67.3	4-Aug	67.3	4-Aug
1.991	18.2	6-Jul	36.8	6-Jul	49.8	6-Jul	50.6	6-Jul	50.6	6-Jul	76.2	29-Jun	79.5	29-Jun	79.5	29-Jun	79.5	29-Jun	64.0	30-Jun
1.992	12.6	28-Jul	29.2	28-Jul	44.8	28-Jul	50.5	28-Jul	53.3	28-Jul	65.4	28-Jul	67.2	28-Jul	67.8	28-Jul	68.5	28-Jul	67.2	28-Jul
1.993	26.4	2-Jul	55.7	2-Jul	66.1	2-Jul	66.1	2-Jul	77.1	2-Sep	94.8	2-Sep	101.8	2-Sep	111.3	2-Sep	121.2	2-Sep	111.6	3-Sep
1.994	14.8	6-Jul	33.2	1-Jun	38.2	11-Dec	56.6	11-Dec	62.2	11-Dec	99.7	11-Aug	139.7	11-Dec	139.7	11-Dec	139.7	11-Dec	115.0	11-Dec
1.995	19.8	14-Jun	40.4	18-Jun	68.3	18-Jun	82.8	18-Jun	84.3	18-Jun	117.3	18-Jun	122.2	18-Jun	122.2	18-Jun	131.8	18-Jun	131.8	18-Jun
1.996	29.0	7-Sep	51.2	7-Sep	74.9	7-Sep	0.7	7-Sep	93.7	15-May	107.1	7-Sep	108.3	7-Sep	108.3	7-Sep	112.0	15-May	112.0	15-May
1.997	25.4	22-Sep	40.8	15-May	52.1	15-May	60.8	6-Jul	61.8	6-Jul	80.3	6-Jul	85.6	2-Nov	101.0	2-Nov	144.3	2-Nov	94.6	2-Nov

The Maximum Intensity of Rainfall per Interval (mm)

	Jan	Feb	Mar	Apr	May	Jun	Jul.	Aug	Sep	Oct	Nov	Dec	Annual
Average (mm)	12.4	2.2	10.4	497	176.6	206.4	226.6	216.8	273.1	227.1	155.3	40.9	1647.5
Max daily (mm)	70.0	56.8	59.8	126.0	102.0	124.5	127.8	136.5	123.5	134.5	197.9	100.9	197.9
Average number of days with rainfall	1.7	0.5	1.2	2.5	14.0	16.6	18.1	18.2	19.2	17.7	11.4	4.7	125.8

Monthly Rainfall Figures

Additional Weather Condition Information

Additional information on temperature, humidity and evaporation is reproduced below:

	Air Temperature					Humidity		Evaporation
	Average (°C)	Average max (°C)	Average min (°C)	Extreme max (°C)	Extreme min (°C)	Average absolute (mb)	Average relative (%)	Average (mm)
Jan	25.3	29.8	21.6	34.2	14.8	25.2	81	83.8
Feb	26.1	31	22.7	35.2	17.3	26.1	79	96.8
Mar	27.3	32.5	23.5	38.5	17.5	27.6	77	110.5
Apr	28.5	33.4	24.6	40.0	19.2	29.7	78	96.5
May	27.8	32.9	24.9	38.3	18.7	31.3	83	68.9
Jun	27.1	31.2	24.4	37.3	19.0	30.9	86	55.7
Jul.	26.8	30.9	24.3	36.8	19.5	30.6	85	60.3
Aug	26.7	30.7	24.2	35.5	19.7	30.6	86	60.3
Sep	26.8	30.5	24.2	34.8	17.8	30.7	86	48.8
Oct	26.8	30.3	24.3	35.8	18.7	30.6	85	49.1
Nov	26.8	30	24.0	34.2	17.5	29.2	84	58.9
Dec	25.6	29.1	22.4	34.0	16.5	26.6	82	66.7
Annual	26.8	31.0	23.8	40.0	14.8	29.1	83	856.3

Annual Temperature, Humidity & Evaporation

Tides

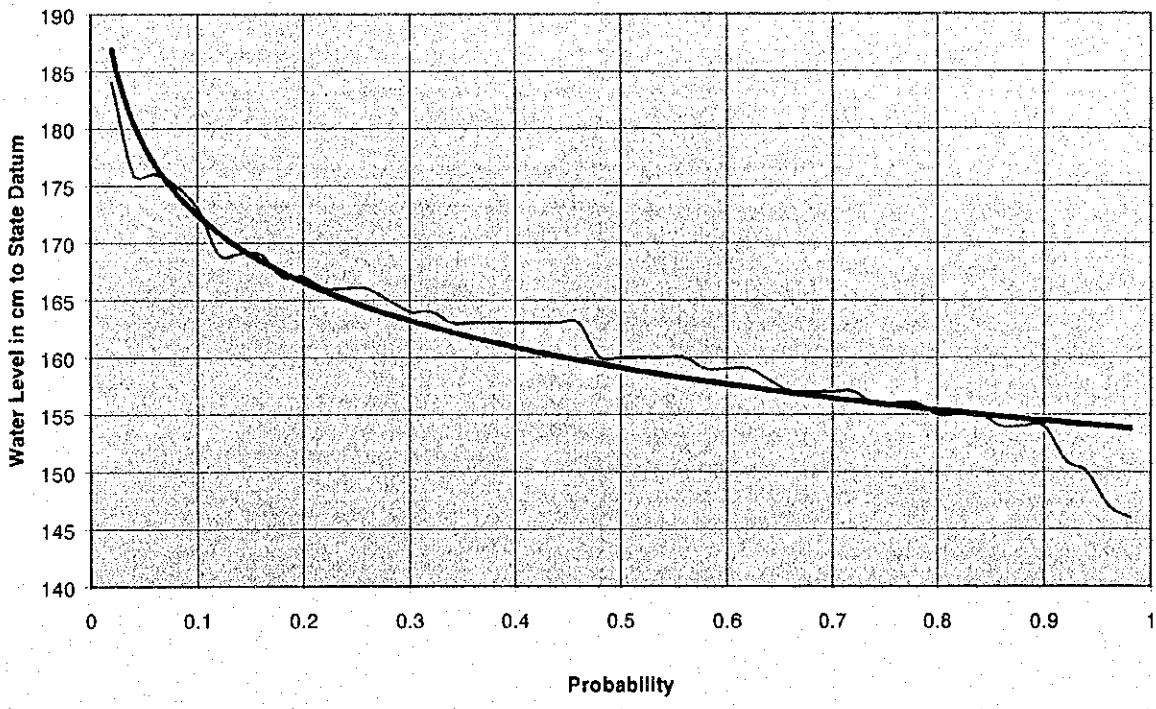
Predicted tide tables for ports in Viet Nam are published annually by the Marine Hydrometeorological Centre. Copies may be obtained from the Centre at Dong Da, Hanoi, telephone 04 834 3558

Floods

Flood levels in Can Tho for the years 1949 - 1998 and a graphical representation of predicted flood levels are reproduced below

Year	Highest	Year	Highest	Year	Highest	Year	Highest	Year	Highest
1950	163	1960	164	1970	155	1980	163	1990	151
1951	157	1961	169	1971	160	1981	157	1991	158
1952	169	1962	163	1972	175	1982	160	1992	166
1953	156	1963	154	1973	159	1983	160	1993	164
1954	176	1964	160	1974	163	1984	166	1994	176
1955	146	1965	155	1975	156	1985	154	1995	167
1956	157	1966	160	1876	147	1986	159	1996	173
1957	163	1967	163	1977	154	1987	157	1997	184
1958	159	1968	163	1978	166	1988	150	1998	167
1959	156	1969	155	1979	165	1989	169		

Maximum Recorded Flood Levels - cm above State Datum



Graphical Presentation of Frequency of Occurrence of Different Flood Levels

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