CONTRACT
FOR
GEOTECHNICAL INVESTIGATION
ON
THE DETAILED DESIGN STUDY ON LACH HUYEN PORT INFRASTRUCTURE CONSTRUCTION PROJECT (ROAD & BRIDGE PORTION)
IN
THE SOCIALIST REPUBLIC OF VIETNAM

This Contract made and entered into the 18th day of April, 2011 by and between

NIPPON KOEI CO., LTD (hereinafter referred to as NK), which comprises the JICA Study Team, duly organized with its principal office located at 4, Kojimachi, 5-chome, Chiyoda-ku, Tokyo, Japan

- and -

Transport Engineering Design Incorporated (TEDI), a company duly organized with its principal office located at 278 Ton Duc Thang Str., Dong Da Dist., Hanoi, Vietnam (hereinafter called "the Contractor").

WITNESS that the parties covenant, promise and agree each with the other as follows:

The Contractor agrees to do and complete the Geotechnical Investigation (hereinafter referred to as "the Services") in accordance with the terms, conditions and requirements of this Contract.

NK agrees to pay the Contractor in consideration of the fulfillment of the Services, the **Contract Price of one hundred twenty three million four hundred forty six thousand eight hundred thirty one Japanese Yen only (¥ 123,446,831)** in accordance with the terms and conditions specified in Clause 1.9 of the General Conditions.

It is agreed that the terms, conditions and requirements of the Contract shall prevail to the extents that are expressly specified in this Contract.

IN WITNESS WHEREOF, each of the parties hereto has caused this Contract to be executed in duplicate as of the date first above written by its duly authorized representative.

FOR AND ON BEHALF OF
Transport Engineering Design Incorporated (TEDI)

M.S.D.N: 0100107839 - C.T.T.N.H.H - TỔNG CÔNG TY TƯ VẤN THIẾT KẾ GIAO THÔNG VẬN TẢI - Q. ĐỐNG ĐA - TP. HÀ NỘI

_____/1

Pham Huu Son /2

General Director /3

FOR AND ON BEHALF OF
NIPPON KOEI CO., LTD.

_____/1

Yuichi SANO /2

Representative of JICA Study Team, Manager of Highways and Bridge department, Infrastructure Development Division, Overseas Consulting Administration /3

Notes:

/1 Signature
/2 Name of Contractor's Authorized Representative
/3 Position of the Representative

1. GENERAL CONDITIONS

1. 1 DEFINITIONS

The following words and expressions shall have the meaning assigned to them except where the context otherwise requires:

(a) "JICA" shall mean the Japan International Cooperation Agency, the official agency implementing Japanese Government's technical assistance and expediting proper execution of the Japan's grant aid.

(b) The "JICA Study Team" (hereinafter referred to the JICA Team) shall mean a person or persons of Oriental Consultants Co., Ltd., Nippon Koei Co., Ltd., PADECO Co., Ltd. and Japan Port Consultants Ltd. to perform services for the Detailed Design Study for Lach Huyen Port Infrastructure Construction Project in Viet Nam (hereinafter referred to the Study).

(c) The "Contractor", shall mean any person, firm or company whose tender has been accepted by the JICA Team and approved by JICA.

(d) The "Contract" shall mean the agreement between the JICA Team and the Contractor, and include General Conditions, Technical Specifications, Bill of Quantities with respect to the Contract.

(e) The "Service" shall mean the services specified in the Technical Specifications to be carried out by the Contractor under the Contract for the Study.

(f) The "Bill of Quantities" shall mean the price schedule annexed or issued under the Contract.

(g) The "Unit Price" shall mean the unit price stated in the Bill of Quantities or the Price Schedule attached to the Contract.

(h) The "Technical Specifications" shall mean the specifications annexed or issued under the Contract.

(i) The "Drawings" shall mean the drawings referred to the Technical Specifications and any modification of such figures and drawings approved in writing by the JICA Team.

(j) The "Site" shall mean Lach Huyen Port and adjacent areas where Surveys and Investigations mentioned in the Technical Specifications are conducted.

1.2 EFFECTIVE DATE OF CONTRACT AND COMMENCEMENT OF THE WORKS

The Contract shall be effective on the date when the Contract has been approved by JICA. The Contractor shall commence the Services upon receipt of "Notice to Proceed" which will be issued by the JICA Team.

1.3 MANNER OF EXECUTION

All the Service to be done under the Contract shall be executed in accordance with the Technical Specifications, or where not specified therein in accordance with such instructions and orders as the JICA Team may give.

1.4 OFFICIAL PERMISSION AND SITE CLEARANCE

Official permission and site clearance from the authorities concerned for the execution of the Service at the Site shall be arranged by the Contractor at his own expenses.

1.5 CONTRACTOR'S REPRESENTATIVE AND PERSONS

The Contractor shall make his own arrangement for the engagement of all the engineers, technicians and labors necessary for the execution of the Service. The Contractor shall submit to the JICA Team for approval a complete list of staffs showing names, functions, personal bio-data and period of assignments prior to commencement of the Services. The Contractor shall be responsible for observation of all regulations and safety precautions imposed by labor legislation and authorities in the Socialist Republic of Vietnam.

1.6 MATERIALS, EQUIPMENT AND FACILITIES TO BE PROVIDED BY THE CONTRACTOR

The Contractor shall at his own expense supply and provide all the equipment, materials and labor, software and other things or every kind required for the execution and completion of the Service.

1.7 INSURANCE

The Contractor shall at his expense effect accident and injury insurance for engineers, technicians and labors employed by the Contractor for the execution of the Services, and shall keep the JICA Team free from any claim for the compensation of such accident and injury.

The Contractor shall at his own expense insure the equipment, materials and facilities to be provided by the Contractor and keep each part thereof insured for its full value against loss, damage and fire.

Third Party Insurance should be purchased by the Contractor to indemnify the JICA Team from any damages or accidents of the third party which may arises from the acts of the Contractor, his sublets or their staff during the contract period.

1.8 PROCUREMENT METHOD

(a) Bidding

Selection of the Contractor shall be, in principle, done by means of Limited Local Bidding (LLB). Local firms invited to the LLB are requested to submit the following information for the Service to the JICA Team at the place appointed in an invitation letter within seven (7) calendar days after receiving the invitation letter and the specifications. The format of Bidding document are attached in Appendix.

(1) Company Profile, including Name, Address, Establishment date, Number and Specialty of employee, Bank references, Capital, Company experience last ten (10) years relevant to this service, etc. and Company brochures if available.

(2) Bid Price with breakdown by item.

(3) Supporting information, including Time Schedule, List of Equipment to be used, etc.

(b) Contract Negotiation

After evaluation of the documents technically and financially, the JICA Team will invite the first ranked Bidder to have contract negotiation. If the JICA Team and the Bidder cannot reach a mutual consent, the JICA Team will invite the next ranked Bidder to the negotiation.

(c) Agreement

The JICA Team and the Contractor shall conclude the Contract by a written agreement (Agreement).

(d) Contract Period

The contract period is from the date when the Agreement is signed to the date as specified in the Technical Specifications.

1.9 TERMS OF PAYMENT

(a) Currency

The currency of the Contract shall be Japanese Yen.

(b) Time of Payment

The payments for the Services shall be made by the JICA Team to the Contractor in the following manner:

(1) Advance Payment equivalent to forty (40) percent of the total Contract

Amount shall be paid to the Contractor within fourteen (14) days after receipt of invoice from the Contractor after signing of the Contract and,

(2) Second Payment equivalent to thirty (30) percent of the total Contract Amount shall be paid to the Contractor within fourteen (14) days after the acceptance by the JICA Team upon the completion of field Service and receipt of invoice from the Contractor and,

(3) Balance of Payment shall be made by the JICA Team within fourteen (14) days after the approval given by the JICA Team on the submission of all the Submittals and receipt of invoice from the Contractor.

(c) Total Amount of Payment

The total amount of payment shall be fixed after making adjustment of the final payment to the quantity of the Service actually done by the Contractor, but does not exceed the contract amount in the Agreement.

(d) Method of Payment

The payment shall be made upon receipt of invoice from the Contractor by means of transfer from Nippon Koei Co. Ltd. to the account of the Contractor. Details are specified in Appendix-2 of this contract.

1.10 TAXES AND RELATED CHARGES

All the income and other taxes, levies, imposes, deductions, charges, fees and similar assessments whatsoever imposed, assessed, levied or collected by the Government of Vietnam, or any sub-divisions thereof or any taxing authority therein, upon the Contractor and his staff shall be paid and/or borne by the Contractor.

1.11 VARIATION AND OMISSIONS

The Contractor shall not alter any of the Services except as directed in writing by the JICA Team. The JICA Team shall have full power, from time to time, during the execution of the Contract, to direct the Contractor to alter, amend, omit, add to or otherwise vary any of the Services, by notice in writing, and the Contractor shall carry out such variations.

In any case where such a direction involves an increase or decrease in the Contract Price, the difference in cost to the Contract, if any, occasioned by such variations, shall be adjusted from the Contract Price as the case may require, unless otherwise specified.

1.12 REJECTION

If at any time before the Service is accepted by the JICA Team, the JICA Team shall decide that any Services done by the Contractor is defective or not in accordance with the Contract or that the Services or any portion thereof are defective or do not fulfill the requirement of the Contract, then the Contractor shall with all speed and at his own expense rectify defects so specified. In case the Contractor shall fail to do so, the JICA

Team may take at the cost of Contractor, such steps as may in all the circumstance be reasonable to make good such defects.

1.13 DELAY IN COMPLETION

If the Contractor fails to complete the Service in accordance with the Contract by the date stipulated in the Contract, there shall be deducted from the Contract Price as and for liquidated and ascertained damages a sum of money with equal to one (1) permil (1/1,000) of Contract Price per day delay, until maximum 5 % of Contract Price. The JICA Team has the right to terminate the Contract if the delay has reached maximum 5 % of Contract Price, and the Contractor will be paid up to the current progress approved by the JICA Team.

1.14 DOCUMENTS

All the correspondences, figures, drawings and other documents shall be made in the English language. The several documents shall be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be adjusted as much as possible by amicable arrangement between both parties.

1.15 INSPECTION OF WORK

The JICA Team shall at all times have access to the Services wherever it is in preparation or progress and the Contractor shall provide necessary facilities for such access and for inspection, including boats and cars.

Where the specifications require any Service to be specially tested or approved, the Contractor shall give the JICA Team timely notice of his readiness for inspection and, if the inspection is by an authority other than the JICA Team, of the date fixed for such inspection.

2. TECHNICAL SPECIFICATIONS FOR GEOTECHNICAL INVESTIGATION

2.1 GENERAL

These specifications shall be applied to the Geotechnical Investigation for the Detailed Design Study on the Lach Huyen Port Infrastructure Construction Project in the Socialist Republic of Vietnam.

2.2 INVESTIGATION AREA

The geotechnical investigation area consists of approach road area in Hai An side, bridge area and approach road area in Cat Hai side along the proposed approach road and bridge in Preparatory Survey on Lach Huyen Port Infrastructure Construction Project (Road and Bridge Portion) in 2010 as shown in **Figure 1**.

Exact locations of borehole and field Vane shear test of the above investigation will be instructed by the JICA Team at least 10 calendar days before starting the preparation works.

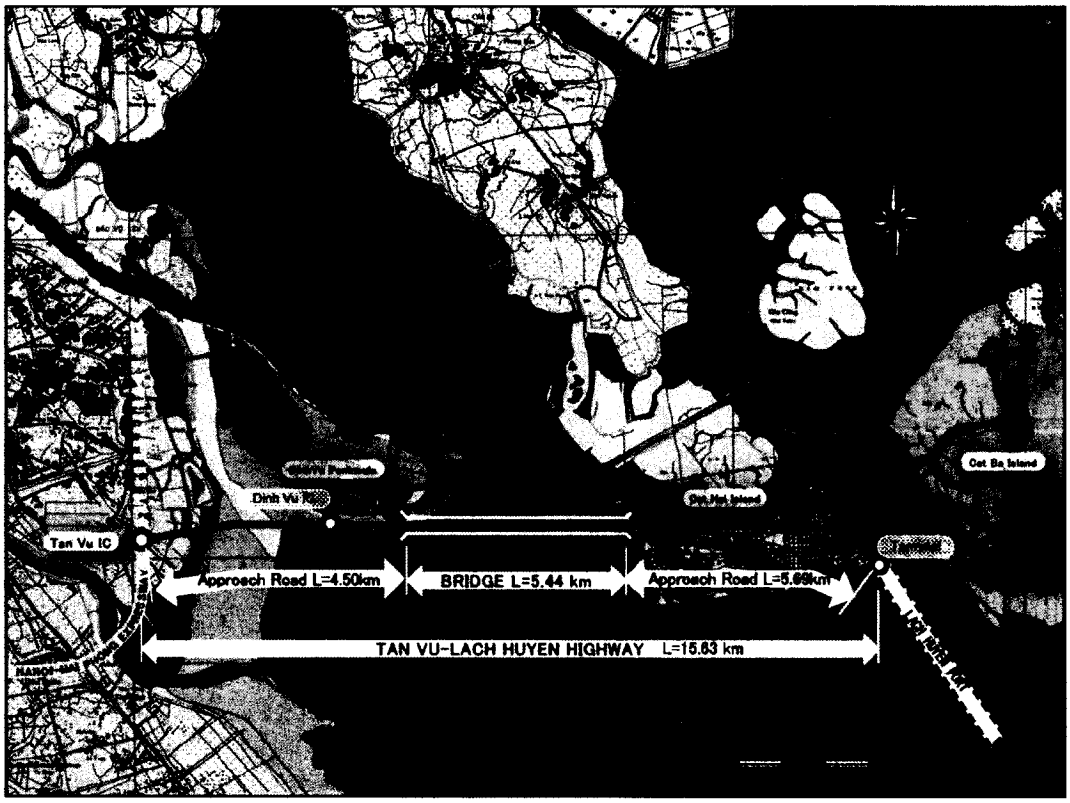


Figure 1 Location Map

2.3 SCOPE OF SERVICES

The Service consists of the following investigations:

(1) Geotechnical investigation for approach road area in Hai An side (L = 4.50 km),
(2) Geotechnical investigation for bridge area (L = 5.44 km), and
(3) Geotechnical investigation for approach road area in Cat Hai side (L = 5.69 km).

Each geotechnical investigation consists of the following items and quantities.

Transportation, materials, equipment and other incidentals of services are included in the respective works.

(1) Geotechnical investigation for approach road area in Hai An side (L = 4.50 km)

Item	Unit	Quantity	Reference Standards
Drilling Hole	location	30	Onshore
Core Drilling on soil	m	1,200	ϕ 89mm, soil
Standard Penetration Test	test	1,130	ASTM D 1586
Undisturbed Sampling	sample	70	
Natural Water Content	sample	160	ASTM D 2216
Specific Gravity	sample	160	ASTM D 854
Atterberg Limits	sample	160	ASTM D 4318
Grain Size Analysis	sample	160	ASTM D 422
Unit Weight Test	sample	70	ASTM D 4718
Unconfined Compression	sample	40	ASTM D 2166
Triaxial Compression (UU)	sample	15	ASTM D 2850
Triaxial Compression (CU) (including pore pressure)	sample	15	ASTM D 4767
Consolidation	sample	70	ASTM D 2435
Field Vane Shear Test	location	30	
Accumulated Depth of Field Vane Shear Test (20m / location)	m	600	ASTM D 2573

(2) Geotechnical investigation for bridge area (L = 5.44 km)

Item	Unit	Quantity	Reference Standards
Drilling Hole	location	93	Offshore
Core Drilling on coastal deposit	m	4,650	ϕ 89mm, soil and rock
Standard Penetration Test	test	4,158	ASTM D 1586
Undisturbed Sampling	sample	27	
Natural Water Content	sample	306	ASTM D 2216
Specific Gravity	sample	306	ASTM D 854
Atterberg Limits	sample	306	ASTM D 4318
Grain Size Analysis	sample	306	ASTM D 422
Unit Weight Test	sample	27	ASTM D 4718
Unconfined Compression	sample	14	ASTM D 2166
Triaxial Compression (UU)	sample	13	ASTM D 2850
Consolidation	sample	27	ASTM D 2435
Specific Gravity of Rock	sample	18	ASTM C 127
Absorption of Rock	sample	18	ASTM C 127
Unconfined Compression Test of Rock	sample	18	ASTM D 2938

(3) Geotechnical investigation for approach road area in Cat Hai side (L = 5.69 km)

Item	Unit	Quantity	Reference Standards
Drilling Hole	location	38	Onshore
Core Drilling on soil	m	1,140	ϕ 89mm, soil
Standard Penetration Test	test	1,055	ASTM D 1586
Undisturbed Sampling	sample	85	
Natural Water Content	sample	199	ASTM D 2216
Specific Gravity	sample	199	ASTM D 854
Atterberg Limits	sample	199	ASTM D 4318
Grain Size Analysis	sample	199	ASTM D 422
Unit Weight Test	sample	85	ASTM D 4718
Unconfined Compression	sample	48	ASTM D 2166
Triaxial Compression (UU)	sample	19	ASTM D 2850
Triaxial Compression (CU) (including pore pressure)	sample	18	ASTM D 4767
Consolidation	sample	85	ASTM D 2435
Field Vane Shear Test	location	38	
Accumulated Depth of Field Vane Shear Test (20m / location)	m	760	ASTM D 2573

2.4 GENERAL REQUIREMENTS

(1) The Contractor shall acquire all permits or licenses required for the Geotechnical Investigation from appropriate governmental or private agencies at his own expense.

(2) The Contractor shall take into account all of possible condition on the progress of works such as any delay resulting from compliance with police and other government regulations and requirements.

(3) The Contractor shall take into account and implement all necessary actions for safety at the working sites.

(4) The Contractor shall take into account of probable weather conditions before signing the Agreement and shall not be entitled to extra payment and time extension by reason of weather, except for the occurrence of exceptional conditions.

(5) If any scaffolding, jetty, pontoon or any other temporary equipment which is used for the boring works is damaged or lost due to an unexpected occurrence or washed away due to meteorological phenomena on flood water, no claim shall be entitled to the Contractor with regard to all these damages and loss.

(6) Any operation which is abandoned because of deficiency in the equipment, materials, labor or other works done by the Contractor or his employees shall not be paid for.

(7) Each paid item shall include costs of materials, equipment, labor and all other costs needed to carry out the work.

(8) Any change in the geotechnical investigation and laboratory test shall be done by written consent made by the JICA Team.

(9) If any loss of boring equipments which is used for the boring work, it is shall be the Contractor responsibility and no claim to the JICA Team.

(10) After finishing the offshore boring work for each boring point, the platform/scaffolding shall be removed immediately and no other material still remain on the sea bottom.

(11) Adequate number of lights or lamps (night time) and flags (day time) shall be installed in the platform/scaffolding in order to prevent the ship clashes.

2.5 WORKING METHOD

2.5.1 Mechanical Boring

- The drilling machine shall be of hydraulic driven rotary type, with drilling capacity sufficient to drill the required depth.
- The diameter of the boreholes shall be 89 mm.
- Drilled boreholes shall be installed using the casing to protect the hole from collapse caused by mud, fracture zones, gravel & boulder during the drilling work.
- Boring shall be terminated after confirming the following layer:
  - For approach road area in Hai An side and Cat Hai side, up to more than 3m of stiff clay layer and/or dense sand layer (Layer 8 or Layer 10A), and
  - For bridge area, up to more than 5 m having N-value of more than 50.
- The sample obtained by the standard penetration test (SPT sample) shall be put into a polyethylene bag for use in the physical test in such a way that water content does not change. SPT sample shall be put into a plastic container and then stored in the laboratory.
- Rock core sample obtained by core boring shall be stored in strongly partitioned core boxes. Each box shall accommodate core with a total length of 5 m. Each core box shall be completely labeled (in English) including project name, location, bore hole number, box number, and depth covered.

2.5.2 Standard Penetration Test (SPT)

- The Standard Penetration Test (SPT) shall be carried out in accordance with ASTM D 1586.
- The SPT shall be performed at every 1.0 m intervals except for the depth of undisturbed sampling.
- The load of hammer shall be 63.5 kg, and it is allowed to free-fall under gravity from a height of 75 cm to act a blow on a split-barrel sampler.
- Prior to the SPT, the bottom of hole shall be washed as clean as reasonably possible to be free of cuttings.
- The Contractor shall drive the sampler with blows from the hammer and count the number of blows in each 15 cm increment. The first set of count of blows is regarded as test and not applied to estimate the N value. The next two successive blow counts shall be recorded as the N value of the SPT. (Thus, the N value is equal to $N_2 + N_3$, while N_1 is not recorded.)

2.5.3 Undisturbed Sampling during Drilling Works

- Undisturbed sampling shall be conducted in accordance with ASTM D 1587.
- A Thin-Walled tube sampler, 75 mm in diameter, shall be used for soft soil having N-value of less than 8. In case of soil having N-value of more than 8, the other type of

sampler shall be used for sampling, which the Contractor shall obtain the approval of the JICA Team.

- The sampler shall be pushed in at a constant speed without stopping in the course of the sampler push-in.
- The sampler shall be sealed with a rubber packing or paraffin immediately after the characteristics of the soil are observed and recorded.
- The collected sample shall be designated with Hole No., Sample No., location, and depth of sample.

2.5.4 Field Vane Shear Test

- Field Vane Shear Test shall be conducted at 2.0 m intervals in accordance with ASTM D 2573.
- The depth of measurement shall be 20 m or instructed by the JICA Team.

2.5.5 Laboratory Test

Laboratory tests are necessary to verify classification and determine engineering properties. The following tests shall be carried out using some SPT samples (disturbed), all thin-walled tube samples (undisturbed) and some rock core samples:

- Natural Water Content ASTM D 2216
- Specific Gravity ASTM D 854
- Atterberg Limits ASTM D 4318
- Grain Size Analysis ASTM D 422
- Unit Weight Test ASTM D 4718
- Unconfined Compression ASTM D 2166
- Triaxial Compression (UU) ASTM D 2850
- Triaxial Compression (CU) (including pore pressure) ASTM D 4767
- Consolidation ASTM D 2435
- Specific Gravity of Rock ASTM C 127
- Absorption of Rock ASTM C 127
- Unconfined Compression Test of Rock ASTM D 2938

2.6 SUBMITTALS

The progress, records and results of the Service shall be consolidated as the reports that are written in English and Vietnamese and Metric system.

All texts and drawings of the reports shall be created or compiled by means of Microsoft Word / Excel and Auto CAD of the latest version.

The following reports shall be submitted to the JICA Team for the approval at the appropriate time in one (1) original and two (2) copies for English version and Vietnamese version, accompanied by relevant compact disks.

(1) Inception Report

Within seven (7) calendar days, after conclusion of the Contract, Inception Report reflecting the Contractor's idea for the execution of the Service shall be submitted for the approval of commencement of the Service.

This report shall, at least, include the following information:

- Objectives,
- Organization of the staff assigned,
- Planed time schedule and locations,
- Standards to be applied,
- List of equipment to be used, and
- Methods.

(2) Weekly and Monthly Report

This report shall, at least, include the following information:

- Progress and program,
- Results of field works, and
- Results of laboratory test.

(3) Final Report

At least (7) calendar days before the termination date of the Contract, Final Report shall be submitted for the approval of completion of the Service.

The contents of the report shall be understandable visually, using explanatory figures, graphs, photographs, etc.

This report shall, at least, include the following information:

- Objectives,
- Organization of the staff actually assigned,
- Time schedule actually performed,
- Standards actually applied,
- List of equipment actually used,
- Data of boring log,
- Coordinates of boreholes,
- Elevation of ground surface at boreholes, according topographic survey,
- Boring method and size of casing used,
- Information on the ground water levels in the borehole during test,
- The soil type and description as identified from the sample with a soil profile of the borehole,
- Results of SPT,
- Soil profiles on the alignments of approach road area in Hai An side, bridge area and approach road area in Cat Hai side,
- Cross sections of soil profile at piers of main bridge,
- Location and methods of undisturbed sampling,
- Results of Field Vane Shear Test,
- Results of the laboratory tests,
- Laboratory test data sheets, and
- Photographs.

2.7 WORK SCHEDULE

The working period for the Geotechnical Investigation shall be about 120 days from the middle of April, 2011, including the laboratory tests and reporting.

Work Schedule

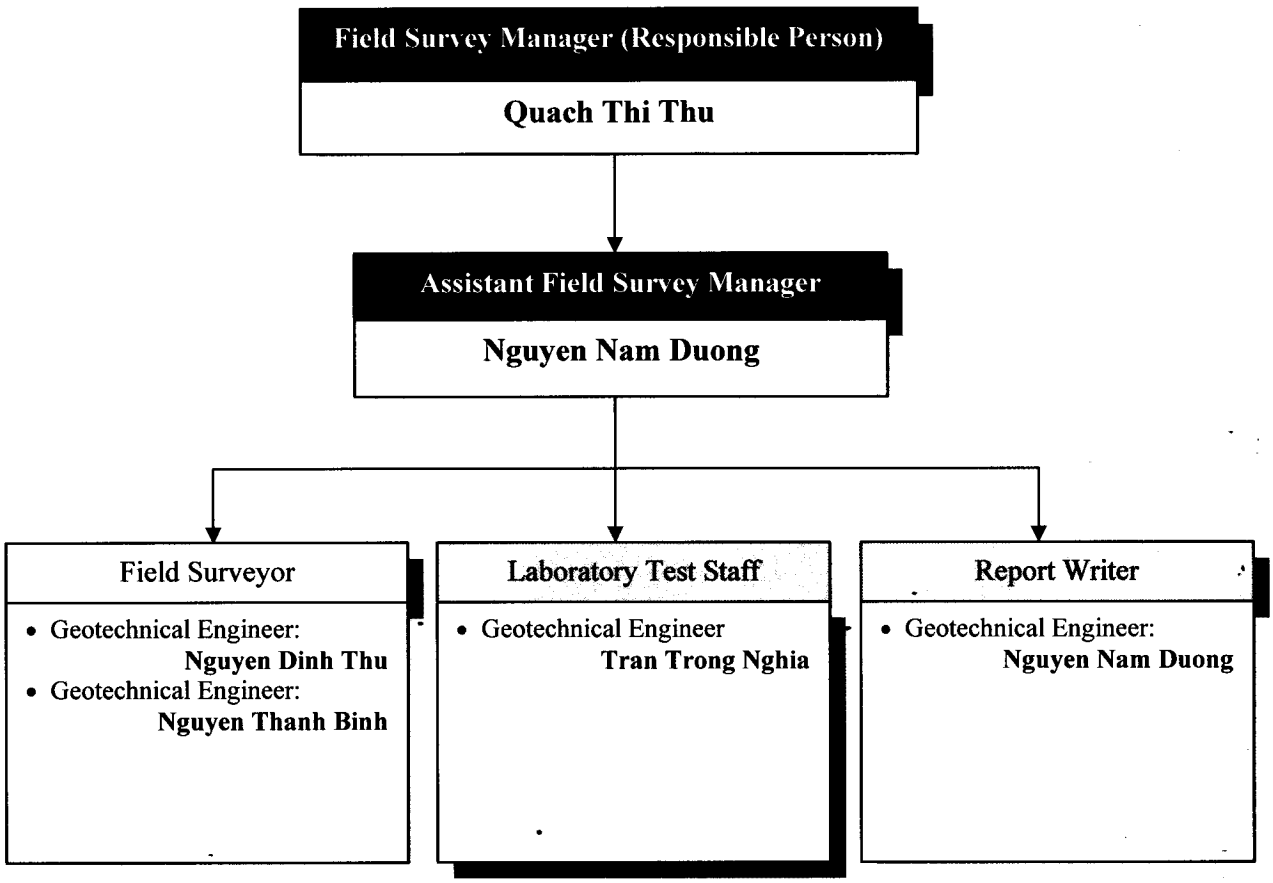
Work	2011				
	April	May	June	July	August
Preparation & Mobilization					
Onshore Drilling for Approach Road Area in Hai An side					
Offshore Drilling for Bridge Area					
Onshore Drilling for Approach Road Area in Cat Hai side					
Field Vane Shear Test for Approach Road Area in Hai An side					
Field Vane Shear Test for Approach Road Area in Cat Hai side					
Laboratory Test					
Reporting					

2.8 BILL OF QUANTITIES AND COST ESTIMATE

STT	Work items	Unit	Quantity	Unit price (Japanese Yen)	Amount (Japanese Yen)
I	**Preparation**				**1,340,000**
	• Mobilization & Demobilization	Ls	1	250,000	250,000
	• Boat Rental	Ls	1	330,000	330,000
	• Car Rental	Ls	1	510,000	510,000
	• Others (including Security Clearance and Insurance)	Ls	1	250,000	250,000
II	**Geotechnical Investigation for Approach road (Hai An side)**				**19,092,755**
	• Shifting and Setting up the Machine (Onshore)	loc.	30	10,000	300,000
	• Core Drilling (on soil)	m	1,200	8,136	9,763,200
	• Standard Penetration Test	test	1,130	2,793	3,156,090
	• Undisturbed Sampling	sample	70	8,603	602,210
	• Laboratory Test				
	a) Natural Water Content	sample	160	251	40,160
	b) Specific Gravity	sample	160	479	76,640
	c) Atterberg Limits	sample	160	610	97,600
	d) Grain Size Analysis	sample	160	220	35,200
	e) Unit Weight Test	sample	70	479	33,530
	f) Unconfined Compression	sample	40	18,865	754,600
	g) Triaxial Compression (UU)	sample	15	26,950	404,250
	h) Triaxial Compression (CU) (including pore pressur	sample	15	54,759	821,385
	i) Consolidation	sample	70	10,587	741,090
	• Field Vane Shear Test (30 locations)	m	600	3,778	2,266,800
III	**Geotechnical Investigation for Bridge**				**65,701,377**
	• Shifting and Setting up the Machine and Platform and removing of Platform (Offshore)	loc.	93	25,000	2,325,000
	• Core Drilling (on coastal deposit)	m	4,650	10,748	49,978,200
	• Standard Penetration Test	test	4,158	2,793	11,613,294
	• Undisturbed sampling	sample	27	8,603	232,281
	• Laboratory test				
	a) Natural Water Content	sample	306	251	76,806
	b) Specific Gravity	sample	306	479	146,574
	c) Atterberg Limits	sample	306	610	186,660
	d) Grain Size Analysis	sample	306	220	67,320
	e) Unit Weight Test	sample	27	479	12,933
	f) Unconfined compression	sample	14	18,865	264,110
	g) Triaxial Compression UU	sample	13	26,950	350,350
	h) Consolidation	sample	27	10,587	285,849
	i) Specific gravity of rock	sample	18	3,000	54,000
	j) Absorption of Rock	sample	18	3,000	54,000
	k) Unconfined Compression Test of Rock	sample	18	3,000	54,000

STT	Work items	Unit	Quantity	Unit price (Japanese Yen)	Amount (Japanese Yen)
IV	**echnical Investigation for Approach Road (Cat Hai side)**				**19,577,936**
	• Shifting and Setting up the Machine (Onshore)	loc.	38	4,000	152,000
	• Core Drilling (on soil)	m	1,140	8,136	9,275,040
	• Standard Penetration Test	test	1,055	2,793	2,946,615
	• Undisturbed Sampling	sample	85	8,603	731,255
	• Laboratory Test				
	a) Natural Water Content	sample	199	251	49,949
	b) Specific Gravity	sample	199	215	42,785
	c) Atterberg Limits	sample	199	610	121,390
	d) Grain Size Analysis	sample	199	220	43,780
	e) Unit Weight Test	sample	85	479	40,715
	f) Unconfined Compression	sample	48	18,865	905,520
	g) Triaxial Compression (UU)	sample	19	26,950	512,050
	h) Triaxial Compression (CU) (including pore pressu	sample	18	54,759	985,662
	i) Consolidation	sample	85	10,587	899,895
	• Field Vane Shear Test (38 locations)	m	760	3,778	2,871,280
V	**Reporting**	LS	1.00		**6,262,324**
VI	**Others**				**250,000**
	• Core boxes	Ls	1.00	150,000	150,000
	• Plastic containers	Ls	1.00	100,000	100,000
	Total (Excluding VAT)				**112,224,392**
	VAT (10%)	%	10		**11,222,439**
	Total				**123,446,831**

APPENDIX – 1: ORGANIZATION CHART



APPENDIX-2: MODE OF PAYMENT

A. The Contractor shall submit an itemized invoice for services performed by himself as described below at the end of his assignment. A sample invoice form is attached hereto.

B. The above invoice shall be submitted to Nippon Koei Co., Ltd. with the following particulars:

Address	:	General Manger Highways and Bridges Dept., Overseas Consulting Administration
Project Code	:	JA10R1013

C. The payment shall be made in Japanese Yen of telegraphic transfer to the account mentioned below within one (1) month from the date of the receipt of the invoice. The Contractor shall confirm in advance the reliability of transferring to this account.

Bank Name	:	Bank for Investment and Development of Vietnam (BIDV)
Account Name	:	TONG CONG TY TU VAN THIET KE GIAO THONG VAN TAI
Account Number	:	VND 211.10.00.0000326
Swift Code	:	BIDV VNVX 211
Bank Address	:	No. 91 Lo Duc Street, Dong Da District, Hanoi
Country (where the bank exists)	:	Vietnam

D. Remittance charges shall be deducted from the amount of each payment.

No. _____

INVOICE

General Manager of Highways and Bridges Dept.
Overseas Consulting Administration
Nippon Koei Co., Ltd.
4 Kojimachi 5-chome
Chiyoda-ku, Tokyo 102-8539
Japan

Date: _____

Subject : Invoice: Geotechnical Investigation for Detailed Design Study on Lach Huyen Port Infrastructure Construction Project (Road & (Project Code : JA10R1013)

Period: For Advanced Payment

Payment should be made to:

Name	:	TONG CONG TY TU VAN THIET KE GIAO THONG VAN TAI
Account No.	:	VND 211.10.00.0000326
Name of Bank	:	Bank for Investment and Development of Vietnam (BIDV)
Sort Code	:	

	Expenditure this Period	Expenditure to Date
1. Advanced Payment		
_____ x 40% =	_____	_____

*Numbers should be rounded to two decimal places and where the digit at the third decimal place is 5 or bigger, the number should be rounded up, where it is smaller than 5, the number must be rounded down.

Total(without VAT)	_____	_____
VAT	_____	_____
Total(with VAT)	_____	_____

(Signature)

Pham Huu Son
General Director