

**GOVERNMENT OF SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF TRANSPORT**



**Consulting Service for Detailed Design
for
Da Nang – Quang Ngai Expressway Development Project
IDA Credit No. 3843-VN**

**Contract
for
Land Acquisition and ROW Staking Works**

BETWEEN

JOINT VENTURE OF NK – NEC – CHODAI – TEC

AND

THANG LOI ENGINEERING CONSULTANTS CO., LTD.

Dated: 01 June 2012

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CONTRACT AGREEMENT
ON
LAND ACQUISITION AND ROW STAKING WORKS
FOR
CONSULTING SERVICES FOR DETAILED DESIGN FOR
DANANG - QUANG NGAI EXPRESSWAY DEVELOPMENT PROJECT
PROJECT ID NO. P.106235
IDA CREDIT NO. 3843-VN

This Contract made and entered into this 1st June 2012, by and between:

Joint Venture of NK – NEC – Chodai – TEC duly organized and existing under the laws of VietNam, with its principal office located at Unit 2, 11th floor, PVFC Building, Lot A2.1, 30 April Street, Hai Chau District, DaNang City (hereinafter referred to as the "Consultant") and Thang Loi Engineering Consultants Co., Ltd., duly organized and existing under the laws of Vietnam, with its principal office located at 16A/93 Trung Kinh Street, Cau Giay, Hanoi, Vietnam (hereinafter referred to as the "Sub-consultant")

WITNESS THAT the parties covenant, promise and agree as follows:

The Sub-consultant agrees to do and complete the Land Acquisition and ROW Staking Works (hereinafter referred to as the "Works") in accordance with the terms, conditions and requirements of this Contract.

The Consultant agrees to pay the Sub-consultant in consideration of the fulfillment of the Works, the Contract Price of Ninety Five Thousand Two Hundred Sixty US Dollars only (USD95,260), including USD8,660 of VAT, in accordance with the terms and conditions specified in Clause 2.12 of General Conditions.

It is agreed that the terms, conditions and requirement of the Contract shall prevail to the extent that are expressly modified or altered by 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 the Consultant

Ichizuru ISHIMOTO
Project Manager
Joint Venture of
NK-NEC-CHODAI-TEC



For and on behalf of the Sub-consultant

Nguyễn Mạnh Cường
Director
Thang Loi Engineering Consultants Co., Ltd.

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II. GENERAL CONDITIONS OF CONTRACT

2.1 Definitions

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

- (a) The "Client" shall mean Project Management No.85 (PMU85) under Ministry of Transport (MOT) of Government of Socialist Republic of Vietnam (GOV).
- (b) The "Project" shall mean Da Nang – Quang Ngai Expressway Development Project, approximately 130 km long, in the central Vietnam.
- (c) The "Service" shall mean the Consulting Services for Detailed Design for Da Nang – Quang Ngai Expressway Development Project to be carried out by the Joint Venture.
- (d) The "Joint Venture" shall mean the Joint Venture of Nippon Koei Co., Ltd., Nippon Engineering Consultants Co., Ltd., Chodai Co., Ltd. and Thai Engineering Consultants Co., Ltd..
- (e) "NK" shall mean Nippon Koei Co., Ltd., the prime consulting firm responsible for the implementation of the Service having an address of its head office at;

4, Kojimachi 5-chome,
Chiyoda-ku, Tokyo, 102-8539, Japan
- (f) The "Project Manager" shall mean team leader of the Joint Venture approved by the Client.
- (g) The "Consultant" shall mean a person or persons of the Joint Venture appointed by the Project Manager.
- (h) The "Sub-consultant" shall mean the person whose bid has been accepted by the Consultant and approved by the Client.
- (i) The "Contract" shall mean the agreement between the Consultant and the Sub-consultant, and include General Conditions, Term of Reference (TOR), Technical Specifications and Priced Bill of Quantities (BOQ) attached hereto.
- (j) The "Site" shall mean the places of the area shown on the attached project location map in Appendix-A.
- (k) The "Works" shall mean the works for the Land Acquisition and ROW Staking Works as shown in the Bill of Quantities attached in the Appendix E.
- (l) The "Contract Price" shall mean the sum named in the Contract as the Contract price.

- (m) The "Bill of Quantities" or "BOQ" shall mean the price schedule attached to the Contract.
- (n) The "Unit Price" shall mean the unit price stated in the Bill of Quantities.
- (o) The "Drawings" shall mean the drawings referred in the Contract and any modification of such figures and drawings approved in writing by the Consultant.
- (p) "Day, Week, Month, Year" shall mean calendar day, calendar week, calendar month and calendar year.
- (q) "Approval" or "Approved" shall mean approval or approved in writing by the Consultant.
- (r) "Writing" shall mean any manuscript, typewritten or printed statement under seal or hand. Words importing the singular only also include the plural and vice versa where the context requires. The fact that the words defined in this Clause are or are not capitalised in the Contract shall not affect their meaning.

2.2 Sub-consultant to Inform Himself Fully

The Sub-consultant by bidding shall be deemed to have satisfied himself as to all the conditions and circumstances affecting the Contract price, and to have fixed these prices according to his own view for these as no additional allowances, except as otherwise expressly provided, will afterwards be made beyond the Contract Price. The Sub-consultant shall be responsible for any misunderstanding or incorrect information, whatsoever, obtained except information given in written by the Consultant. The Sub-consultant shall determine the presence of all services or ground facilities that may be affected by his work.

2.3 Time for Commencement and Completion

The commencement date of the Works is 10 June 2012 and the whole of the Works shall be completed not later than 31 July 2012.

2.4 Manner of Execution

- 1) The Works to be done under this Contract shall be executed in accordance with the Sub-consultant where not specified therein shall be in accordance with such instructions as the Consultant may issue, from time to time, as he considers necessary and appropriate. If something, which is not described in this Contract, occurred, the Sub-consultant shall consider and judge based on the conscience and justice of the engineering.
- 2) The Sub-consultant shall be responsible for observing all regulation and safety precautions required by authorities and/or through legislation.

- 3) The Sub-consultant shall keep good relation with concerned persons and organization of the Works and shall settle any conflict with them at his own responsibility and expense.

2.5 Information and Official Permission

- 1) The Consultant shall make available to the Sub-consultant for the purpose of performing the Works which are listed in the Contract.
- 2) Official permission from the authorities concerned for the execution of the Works at the Site shall be arranged by the Sub-consultant at his own expenses.

2.6 Sub-consultant's Representative and Persons

- 1) The Sub-consultant shall make his own arrangements for the engagement of all the engineers, technicians and labours necessary for the execution of the Works. The Sub-consultant shall submit to the Consultant for approval a complete list of principal staff showing names, functions, personal histories and periods of assignments prior to commencement of the Works.
- 2) The Sub-consultant shall appoint one or more competent representatives from the Sub-consultant's engineers assigned to the Works to superintend the carrying out of the Works on the Site. The names, training and experience of the Sub-consultant's representatives shall be submitted to the Consultant for approval before they are appointed. The said representative, or if more than one shall be appointed, then one such representative shall be present on the site during working hours, and any orders or instructions which the Consultant may give to the said representative of the Sub-consultant shall be deemed to have been given to the Sub-consultant by the Consultant.
- 3) The Sub-consultant shall be responsible for observation of all regulation and safety precautions imposed by labour legislation and authorities in Vietnam. The Sub-consultant shall prepare a safety policy document for submission to the Consultant for approval prior to starting work on the site. No work will be allowed to proceed until this document has been submitted and approved. Any costs delay due to the late submission of this document will be at the Sub-consultant's expense.
- 4) The Consultant shall be at liberty by notice in writing to the Sub-consultant to object to any representative or other person employed by the Sub-consultant in the execution of the Works who shall, in the opinion of the Consultant, misconduct himself or be incompetent or negligent or be sick and the Sub-consultant shall remove such person from the Works and provide an acceptable replacement for such person at the Sub-consultant's expense.

2.7 Working Days and Hours

The Sub-consultant shall carry out the Works on the Site continuously during the normal working hours generally recognised in Vietnam. The Sub-consultant may, with the arrangement of the Consultant, carry out work at other time if it shall be practicable in the circumstances for work to be so done.

2.8 Materials, Equipment and Facilities to be provided by the Sub-consultant

The Sub-consultant shall, at his own expense, supply and provide all the equipment, materials, labors and other things or every kind required for the execution and completion of the Works.

2.9 Program to be Furnished

- 1) The Sub-consultant shall submit to the Consultant for his approval his proposed time schedule and field operation program for each section of the Works.
- 2) After approval by the Consultant of such time schedule and field operation program, the completion time for the Works stipulated in the same time schedule shall be considered as "Guaranteed Time for Completion of the Works", and the Sub-consultant shall adhere to the order of procedure method and time schedule unless he obtains the written permission of the Consultant to vary such order or method or time schedule.
- 3) Such time schedule and field operation program shall be supplemented by the Sub-consultant in weekly progress reports indicating the actual state of progress of all items during the course of the Works at the Site. The form and substance of such weekly reports shall be satisfactory to the Consultant. The weekly progress report shall be submitted by Monday of the following week to which it applies.
- 4) In the course of the Works, when the Consultant calls the Sub-consultant for a meeting, the Sub-consultant and/or his representatives shall at any time and at his own expense attend the meeting and shall report the actual state of Works.

2.10 Insurance

- 1) The Sub-consultant shall at his expense effect accident and insurance for engineers, technicians and labours employed by the Sub-consultant for the execution of the Works, and shall indemnify the Consultant from any claim for the compensation of such accident and injury, damage to property and third parties caused in undertaking the duties and all claims whatsoever.

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

2.11 Force Majeure

- 1) If either party is temporarily unable by reason of force majeure or the law or regulation of to meet any of its obligation under the Contract, and if such party gives to the other party written notice of the event within fourteen (14) days after its occurrence, such obligations of the party, as it is unable to perform by reason of the event, shall be suspended for as long as the inability continues.
- 2) Neither party shall be liable to the other party for loss or damage sustained by such other party arising from any event referred to in Clause 2.11 1) or delay arising from such event.
- 3) The term "Force Majeure" as employed herein shall mean Act of God, strikes, lock-outs or other industrial disturbances, acts of the public enemy, wars, blockades, earthquakes, storm, lighting, floods, washouts, civil disturbances, explosion, curfews, and any other similar event, beyond the control of either party.

2.12 Terms of Payment

- 1) This is a unit rate contract.
- 2) As soon as the Works has been started, the Sub-consultant shall submit to the Consultant, the invoices of amount payable. After checking the invoices, the Consultant shall pay the Sub-consultant in respect of the Works. The Consultant reserves the right to exclude such items that are not considered to be authenticated, from the payment.
- 3) First payment equivalent to Forty percent (40%) of the Contract Price shall be made to the Sub-consultant after approval by the Consultant for both of the following items:
 - Completion of mobilization of personnel and equipment at the Site,
 - Approval of the work plan by the Client.
- 4) Second payment equivalent to Forty percent (40%) of the Contract Price shall be made to the Sub-consultant upon acceptance of the outcome by the Consultant.
- 5) Final payment equivalent to Twenty percent (20%) of the Contract Price, with adjustment of performed work quantities, shall be made to the Sub-consultant upon issuance of "Work Completion Certificate" by the Consultant after receiving the acceptance letter by PMU85.



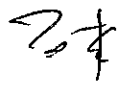
- 6) No extra payments in respect of overtime, holiday work, additional equipment, materials and facilities, or special conditions of hardship shall be claimed by the Sub-consultant beyond the Contract price.
- 7) Payment procedure is provided in Appendix-B. Remittance charge shall be paid by the Sub-consultant.
- 8) The Sub-consultant shall issue VAT invoice for each payment.

2.13 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 subdivisions thereof or any taxing authority therein, upon the Sub-consultant and his staff shall be paid and/or borne by the Sub-consultant.

2.14 Variations and Omissions

- 1) The Sub-consultant shall not alter any of the Works except as directed in writing by the Consultant. The Consultant shall have full power, from time to time, during the execution of the Contract, to direct the Sub-consultant to alter, amend, omit, add to or otherwise vary any of the Works, by notice in writing, and the Sub-consultant shall carry out such variations. In case the Consultant asks the Sub-consultant, on the spot, to change the areas to be investigated from the originally proposed areas, the Sub-consultant shall at that instance obey such directions and later obtain written confirmation from the Consultant.
- 2) If a decrease in the Works is ordered by the Consultant, such orders shall not constitute any ground for claim for damage or loss of anticipated profits on the Works. All extra additional Works shall be performed with the same materials and workmanship as employed for the Works of similar character in the original one as far as they are applicable thereto.
- 3) In any case there 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. The amount of such difference shall be ascertained and determined in accordance with the unit prices specified in the BOQ, so far as the same may be applicable, and where the unit prices are not contained therein, such amount shall be reasonably agreed between the Consultant and the Sub-consultant in writing.
- 4) In case some modification and/or variation are requests made by Consultant and/or Client, those works shall be paid by Consultant basing on the unit price in BOQ and the actual



quantity. In case such modifications and/or variations requested are not included in the BOQ, both Parties will discuss to make a supplementary agreement to the Contract.

2.15 Sub-consultant's Default

- 1) If the Sub-consultant shall neglect to execute the Works with the diligence and expedition or shall refuse or neglect to comply with any reasonable instructions or orders given in writing by the Consultant in connection with the Works, or shall contravene the provisions of the Agreement, the Consultant may give notice in writing to the Sub-consultant to make good the failure, neglect or contravention complained of.
- 2) In case, the Sub-consultant fail to comply with the notice within a reasonable time from the date thereof, then and in such case the Consultant shall be at liberty to employ other workmen and forthwith execute such part of the Works as the Sub-consultant may have neglected to do, or, if the Consultant shall think fit, it shall be lawful for him, without prejudice to any other right he may have under the Contract, to make the Works wholly or in part out of the Sub-consultant's hands and re-contract with any other person or persons to complete the Works or any part thereof.
- 3) The Consultant shall be entitled to retain and apply any balance which may be otherwise due by him to the Sub-consultant, or such part hereof as may be necessary to payment of the cost of executing the said part of the Works of completing the Works as the case may be. If the cost of completing the Works or executing part thereof as aforesaid shall exceed the balance due to the Sub-consultant, the Sub-consultant shall pay such excess upon request writing from the Consultant.

2.16 Rejection

If at any time before the Works are accepted by the Consultant, the Consultant shall decide that any work done by the Sub-consultant is defective or not in accordance with the Sub-consultant or that the Works or any portion thereof are defective or do not fulfil the requirements of the Contract, then the Sub-consultant shall with all speed and at his own expense make good defects so specified. In case the Sub-consultant shall fail so to do, the Consultant may, provided he does so without undue delay, take at the cost of Sub-consultant, such steps as may in all the circumstances be reasonable to make good such defects.

2.17 Time for Completion

- 1) The whole of the Works shall be completed with the time guaranteed by the Sub-consultant or such extended time as may be allowed under the following paragraph.

- 2) The Sub-consultant shall not be held responsible for failure to carry out his obligations in case of force majeure, such as embargo, blockade, war, natural disasters or any disaster or any circumstances beyond his reasonable control.
- 3) The Sub-consultant shall notify the Consultant in writing within seven (7) days of the commencement of force majeure conditions. Depending on the production of satisfactory evidence and if the existence of force majeure conditions is accepted by the Consultant, the Consultant will grant extension of the Guaranteed Time for Completion of the Works sufficient to compensate for delay due to force majeure without penalty.

2.18 Delay in Completion

If the Sub-consultant fails to complete the Works in accordance with the Contract within the time fixed by the Contract, there shall be deducted from the Contract Price as and for liquidated and ascertained damages a sum of money equal to a half percent (0.5%) of the Contract Price for each day between the Guaranteed Time for Completion of the Works and the actual date of completion but the amount so deducted shall not in any case exceed five percent (5%) of the Contract Price. Such deduction shall be in full satisfaction of the Sub-consultants liability for the said failure. The Consultant may request the Sub-consultant to employ additional labour or use additional equipment and materials and the Sub-consultant will do so at his expense in case a delay in the completion of the works has to be expected.

2.19 Suspension of the Works

The Sub-consultant shall, on the written order of the Consultant, suspend the progress of the Works or any part thereof for time or times and in such manner as the Consultant may consider necessary and shall be doing such suspension properly protect and secure the works so far as is necessary in the opinion of the Consultant. All expenses incurred by the Sub-consultant by reason of the suspension of the Works by the Consultant will be at the sole responsibility of the Sub-consultant if the suspension is:

- (a) Otherwise provided for in the Sub-consultant
- (b) Necessary for the proper execution of the works or by reason of whether conditions affecting the safety or the quality of the Works or by some defaults on the part of the Sub-consultant, or
- (c) Necessary for the safety of the Works or any part thereof.

2.20 Certificate of Completion of the Works

As soon as in the opinion of the Consultant, the whole of the Works shall have been satisfactory completed, the Consultant shall issue a Certificate of Completion of Works after

receiving a written application thereof. Upon issuance of such Certificate of Completion of Works, the Sub-consultant shall cease to be under further obligation under the Contract.

When whole the Work completed, a Certificate of Completion of Works shall be issued to terminate the Contract after receiving the acceptance letter from PMU85.

2.21 Bankruptcy

If the Sub-consultant shall become bankrupt or insolvent or have a receiving order made against him, or compound with his creditors, or being a corporation, commence to be wound up, not being a member's voluntary winding up for the purpose of amalgamation or reconstruction, or carry out its business under a receiver for the benefit or its creditors or any of them, NK shall be at liberty:

- 1) To terminate the Contract forthwith by notice in writing to the Sub-consultant or to the receiver, or liquidator, or to any person in whom the Contract may become vested, and to act in the manner provided in Clause 2.15 of the Sub-consultant's Default, as though the last mentioned notice has been the notice referred to in such Clause and the Works has been taken out of the Sub-consultant's hand, or
- 2) To give such receiver, liquidator or other person the opinion of carrying out the Contract subject to his providing a guarantee for the due and faithful performance of the Contract up to an amount to be agreed.

2.22 Assignment and Sublet the Contract

The Sub-consultant shall not, without the prior consent in writing of the Consultant, assign or transfer the Works or the benefits or obligations thereof or any part thereof to any other persons. The Sub-consultant shall not, without the prior consent in writing of the Consultant, which shall not be unreasonably withheld, sublet the Sub-consultant any part thereof or make any sub-contract with any person or persons.

Any such consent if given shall not relieve the Sub-consultant from his obligations under the Contract. The Sub-Sub-consultant shall be regarded as employee of the Sub-consultant. The Sub-consultant shall be solely responsible for the performance of the Sub-Sub-consultant and for all payments to the Sub-Sub-consultant.

2.23 Arbitration

- 1) If any dispute or difference of any kind whatsoever shall arise between NK and the Sub-consultant in connection with the interpretation or application of the Contract, it shall be settled as much as possible by amicable arrangement between both parties. If such

arrangement cannot be realised, the dispute of difference shall be settled by arbitration as provided herein.

- 2) All questions, disputes or differences arising out of or in relation to the interpretation of the Contract which cannot be settled by manual accord shall be submitted to a committee for arbitration consisting of three arbitrators, one to be nominated by NK, another by the Sub-consultant and the third as chairman by the two mentioned arbitrators above, and shall be finally settled in conformity to the rules and procedures of Conciliation and Arbitration of the International Chamber of Commerce. Such arbitration shall be held at such place and time as the arbitrators may decide. Any decision, opinion, direction, certificate or valuation given by the arbitrators shall be obeyed by both parties and be final.

2.24 Notice and Correspondence

Any notice to be given to the Sub-consultant shall be served by sending the same by post, facsimile, email, or leaving the same at the Sub-consultant's principal place of business, or to the address of his representative at the Site. Any notice to be given to the Consultant shall be served by sending the same by post, facsimile, email, or leaving the project office of the Consultant in Danang:

Danang Project Office:

Unit 2, 11th floor, PVFC Danang Building, Lot A2, April 30 Street, Hai Chau District, Danang City, Vietnam

Telephone: +84-(0)511-379-7961

Facsimile: +84-(0)511-379-7962

2.25 Documents

- 1) All the correspondences, figures, drawings and other documents shall be made in both English and Vietnamese.
- 2) The several documents have to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be adjusted in accordance with the provisions of Clause 2.23 thereof.

2.26 Inspection of Work

The Consultant shall, at all times, have access to the Works wherever it is in preparation or progress and the Sub-consultant shall provide necessary facilities for such access and for inspection. Where the specifications require any work to be specially tested or approved, the Sub-consultant shall give the Consultant timely notice of his readiness for inspection and, if

the inspection is by an authority other than the Consultant, of the date fixed for such inspection.

2.27 Maintenance of Security

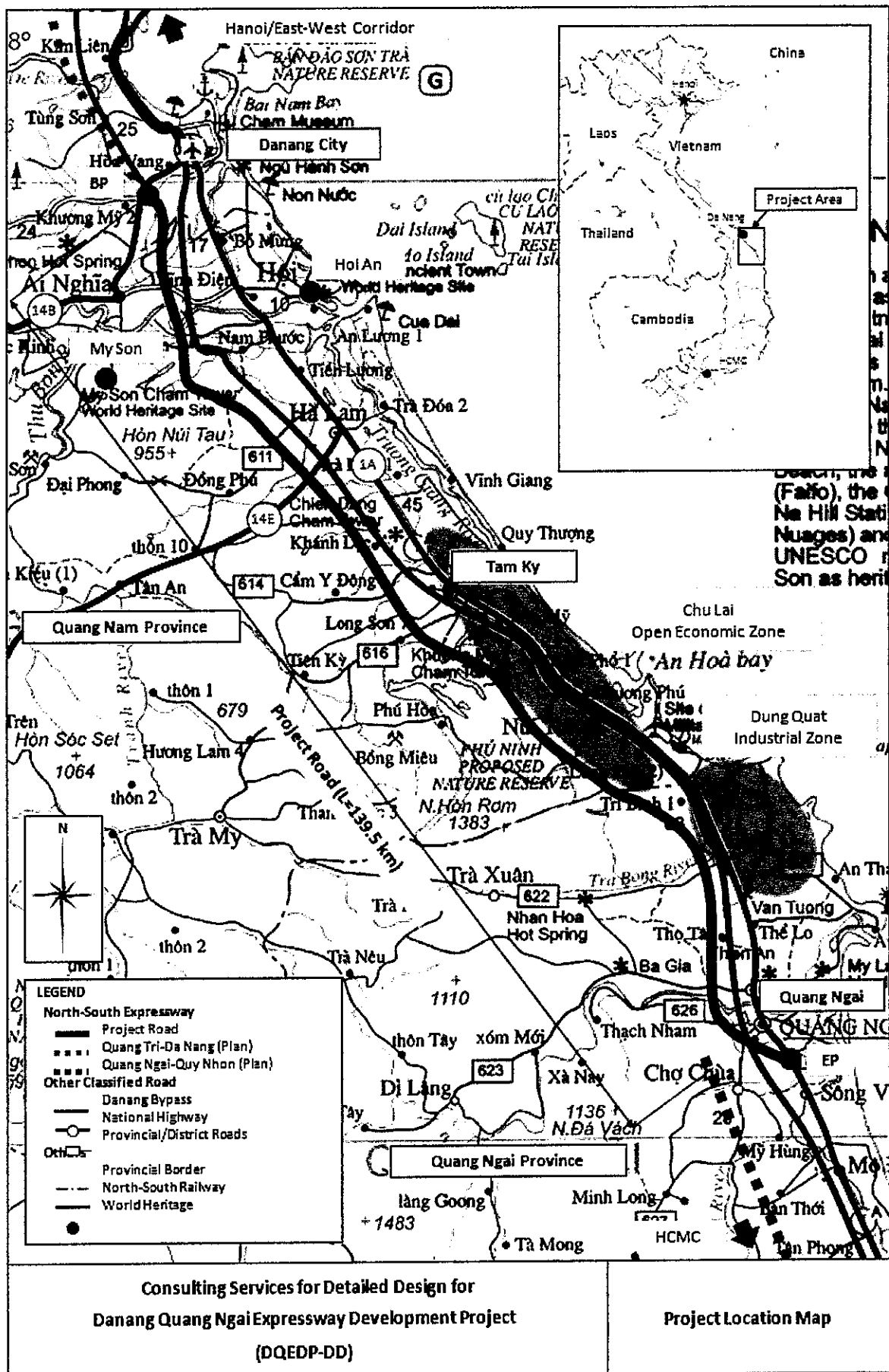
Without obtaining the Consultant's prior written approval, the Sub-consultant shall not disclose, not only during the effective period of this Contract, but also after the termination or completion of this Contract, any information and/or data, etc., which has been made known to the Consultant in executing the Work.

2.28 Emergency Communication Network

The Sub-consultant shall submit to the Consultant an emergency communication network which includes contact numbers and addresses in both case of usual and emergency response.

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Appendix-B: Mode of Payment

- A. The Sub-consultant shall submit an invoice for services performed by him/her. A sample invoice form is attached hereto.
- B. The above invoices shall be submitted to NK with the following particulars:

Address : Mr. Ichizuru Ishimoto
Project Manager

Detailed Design for Danang-Quang Ngai Expressway
Development Project

Unit 2, 11th floor, PVFC Danang Building, Lot A2, April 30 Street,
Hai Chau District, Danang City, Vietnam

Project Code : JA08O1057

- C. The payment shall be made in US Dollar of telegraphic transfer to the account mentioned below within one (1) month from the date of the receipt of the invoice. The Sub-consultant shall confirm in advance the reliability of transferring to this account.

Bank Name : _____
Branch Name : _____
Account Name : _____
Account Number : _____
Bank Address : _____
Country : Vietnam
(where the bank exists):

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

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**Appendix A:
Description of the Services**

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IV. Appendices

APPENDIX A - DESCRIPTION OF THE SERVICES

Terms of Reference

1. Background

The Government of the Socialist Republic of Vietnam (GOVN) represented by Ministry of Transport (MOT) is planning to implement Expressway Development (Da Nang - Quang Ngai) Project (hereafter called the Project). Vietnamese MOT is the line agency who makes investment decision for the Project. Vietnam Expressway Corporation (VEC) is the project owner and Project Management Unit No. 85 (PMU85) is the project management consultant at project preparation and implementation phases until the works is handed over and put into operation. PMU85 is authorized by MOT to manage the implementation of Detailed Design Consulting Services Contract and is also the implementing agency who actively works with relevant authorities to solve all the issues related to the Project. The purpose of the Expressway is to improve the inter-regional transport networks to support the socio-economic development in the Central region and in the whole country and promote traffic safety.

In preparation for the Project, the GOVN commissioned a Feasibility Study (FS) in 2003 which was subsequently revised and completed in March 2008 by JETRO Consultants. In order to meet the requirements of the guidelines and loan procedure of the World Bank and other international financial donors, the FS was updated by Nippon Koei Co., Ltd., being completed in May 2009 and completed by Transport Engineering Design Incorporated (TEDI) in 2010. This updated FS is being reviewed and further refined by CPCS Transcom Limited.

The Project consists of the following three components;

- (1) Component A: Civil Works
Construction of four-lane dual carriageway road (with capacity for eventual widening to six lanes) and 131 km in total length.
- (2) Component B: ITS (Intelligent Transport System) Works
Provision of traffic management and toll collection facilities
- (3) Component C: Expressway Operations and Maintenance
Planning an institution to operate and maintain the expressway and identifying facilities and equipment that it will need.

It is currently expected that the project will be implemented with financial support from the World Bank and the Japan International Cooperation Agency (JICA). Funds from these agencies would be used to finance separate sections of the Project. The current Terms of Reference pertain to the entire Project.

2. Objectives of the Consulting Services

The objectives of the consulting services are:

- To undertake the efficient and proper preparation of the detailed engineering design;

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MOT and the World Bank.

- (4) Providing necessary assistance on invitation for bids, bid opening, pre-bid conference, pre-bid site visits for the pre-qualified interested bidders, preparation of clarification answers and addendum to bidding documents, evaluation of bids, preparation of bid evaluation report in accordance with the World Bank's standard bid evaluation form and the MOT's form for submission for review by concerned agencies including PMU85, VEC, MOT and the World Bank.
 - (5) Assist PMU85/VEC in contract negotiation, preparation and finalization of contracts submission for review by concerned agencies including VEC, MOT and the World Bank.
- 3.5. The Consultant shall stake land acquisition to hand over to local authorities who undertake compensation for land acquisition and resettlement.
- 3.6. The Consultant shall undertake training and technology transfer for PMU85, VEC, local consultant and relevant authorities.

4. Obligations of the Consultants

The Consultants shall commit to complete well all the works stipulated in the TOR and the Contract Agreement. All members of the Consultants shall comply with Vietnamese law and regulations and World Bank requirements during the undertaking of the consulting services in Vietnam.

The Consultants shall be responsible for equipments and software required for carrying out their work.

APPENDIX D: SPECIFICATIONS

Table of Contents

	Page
1. General	1
2. Objective of the Work	1
3. Legal Basis	1
4. Location of the Works	2
5. Work Policy	2
6. Scope of the Work	2
7. Datum for Coordinates and Elevation	3
8. Unit of Measurement	4
9. Language	4
10. Technical Standards to be Referred	4
11. Definitions and Space Requirements	4
12. Work Plan	6
13. Specifications of Stakes	6
14. Supervision of the Work	7
15. Other Requirements	7
16. Time Schedule of the Work	7

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24

SPECIFICATIONS

1. General

The Technical Specifications mentioned hereunder has been designed in order that the Sub-consultant shall carry out the Land Acquisition and ROW Staking Works of Danang - Quang Ngai Expressway with an approximate length of 140km.

2. Objective of the Work

The objective of the Work is to install stakes at the border of both the land acquisition and Right-Of-Way (ROW) along the expressway in order to promote further land acquisition activities by local authorities.

3. Legal Basis

- Construction Law dated November 26, 2003;
- Decree No. 209/2004/ND-CP dated December 16, 2004 of the Government on management of construction quality and Decree No. 49/2008/ND-CP dated April 18, 2008 supplementing some articles of Decree No. 209/2004/ND-CP;
- Decree No. 12/2009/ND-CP dated 12/02/2009 of the Government on management and investment projects and Decree No. 83/2009/ND-CP dated October 15, 2009 supplementing some articles of Decree No. 12/2009/ND-CP;
- Decree No. 11/2010/ND-CP dated February 24, 2010 of the Government on management and protect road infrastructure;
- Document No.2740/BGTVT-CQLXD dated April 29, 2010 of Ministry of Transport on guiding implementation of the land acquisition of transport project;
- Decision No.147/QD-VEC dated September 06, 2010 of Viet Nam Expressway Corporation on approval on the work plan of land acquisition and right of way of Da Nang – Quang Ngai expressway of three sections: Km0-Km19+200, Km60-Km73 and Km109-Km131.5 and linking road to NH1A;
- Decision No. 2656/QD-BGTVT dated September 10, 2010 of Minister of Transport on approval on feasibility study of Da Nang – Quang Ngai expressway project;
- Consulting services contract for detailed design for Danang – Quang Ngai Expressway Development Project between Project Management Unit No. 85 and Joint Venture of Nippon Koei Co., Ltd., Nippon Engineering Consultants Co., Ltd., Chodai Co., Ltd. and Thai Engineering Consultants Co., Ltd., dated 15th day of November, 2011.
- Letter No.45/BQL-DNQN dated March 15, 2012 of project coordination board for Da Nang – Quang Ngai expressway regarding documents of land acquisition for

remaining sections;

- Letter No.1374/VEC-KTCNMT dated May 30, 2012 of Viet Nam Expressway Corporation regarding scope of Right of Way ;
- Letter No.133/BQL-DNQN dated June 01, 2012 of Da Nang – Quang Ngai Expressway Project Management Board regarding implementation of land acquisition and ROW staking;

4. Location of the Works

The proposed expressway starts at the beginning point located within Da Nang City, passes Quang Nam Province and extends to the ending point located within Quang Ngai Province.

During the F/S stage, the ROW staking for the following three sections of the expressway had already carried out in accordance with the F/S alignment:

Section Km0-Km19+200

Section Km60-Km73

Section Km109-Km131.5 and linking road to NH1A

Location of the work is for whole of the expressway other than the sections already staked during the F/S.

5. Work Policy

All the works shall be carried out in accordance with the Specifications or the instructions by the Consultant may give.

6. Scope of the Work

Work quantities of the remaining sections are estimated based on the following design information which is the latest available as June, 2012.

Base Topographic Map: 1/1,000

Horizontal Alignment: F/S Modified agreed by MOT letter No.1619/BGTVT-CQLXD dated on March 9, 2012

Vertical Alignment: Version 5a (Under updating)

Typical Cross Section: Updating version

Provisional work quantities are summarized in the table below. The coordination of the staking shall be provided by the Consultant, time to time.



Table 4.1 Provisional Work Quantities (Throughway)

No.	City/Province	District	From	To	Length	LA	ROW	Total
1	Quang Nam	Dien Ban	17+850	20+100	2,250	31	24	55
2		Duy Xuyen	20+200	24+700	4,500	94	58	152
3		Duy Xuyen	24+700	29+465	4,765	96	32	128
4		Que Son	29+465	39+650	10,185	204	72	276
5		Thang Binh	39+650	52+350	12,700	242	112	354
6		Phu Ninh	52+350	60+140	7,790	196	100	296
7		Nui Thanh	71+100	99+200	28,100	566	189	755
8	Quang Ngai	Binh Son	99+200	110+100	10,900	220	73	293
		SUB TOTAL 1						2,309

Table 4.2 Provisional Work Quantities (Interchange)

No.	City/Province	District	From	To	Length	LA	ROW	Total
1	Danang	Tuy Loan	0+000	2+000	2,000	30	30	60
2	Quang Nam	My Son	12+880	13+810	980	40	20	60
3		Ha Lam	40+300	41+270	970	40	20	60
4		Tam Ky	63+980	64+930	950	40	20	60
5		Chu Lai	82+500	83+350	850	40	20	60
6		Dung Quat	101+250	102+200	950	40	20	60
7	Quang Ngai	Binh Son	112+000	112+920	920	40	20	60
8		Quang Ngai N.	123+340	124+220	880	40	20	60
9		Quang Ngai	130+050	130+870	820	40	20	60
		SUB TOTAL 2						540
		TOTAL						2,851

7. Datum for Coordinates and Elevation

The following datum shall be applied to the coordinates and elevation.

Coordinates:

National Coordinate System (VN2000)
 Ellipsoid: WGS84
 Projection: Transverse Mercator (Zone width: 3 degrees)
 Central Meridian: 108.00.00 East
 Scale Factor: K=0.9999

Elevation:

National Elevation System (Hon Dau Island, Hai Phong)

8. Unit of Measurement

Unit of measurement shall be the metric system.

9. Language

All correspondences, figures, drawings and other documents shall be made both in English and Vietnamese.

10. Technical Standards to be Referred

The staking work will be carried out in accordance with the following technical standards

- 96TCN43-1990, Specification for measuring and drawing topography;
- Decree No. 11/2010/ND-CP dated February 24, 2010, Management and Protection of Highway Infrastructure;
- TCVN5729-1997, Expressway Design Standards;
- 22 TCN 210-92, Rural Road Design Standards;
- 22 TCN 237 – 01, Regulation of Road Signal;

11. Definitions and Space Requirements

(1) General

- Land Acquisition width is a required space for building all structures of road including the corridor along the road to manage, maintain, and protect road infrastructures.
- Decree No. 11/2010/ND-CP stipulates the following space requirements for land acquisition:

3m from outer edge of slope

- Decision No. 2656/QD-BGTVT dated September 10, 2010 stipulates the following space requirements for land acquisition:

10m from outer edge slope in order to widen in the future.

- Right-Of-Way (ROW) is a corridor along the road to ensure traffic safety and protection of road infrastructures.
- Decree No. 11/2010/ND-CP stipulates the following space requirements:
ROW width is 47m offset from land acquisition markers.



(2) Road Section

Following values are applied for road section:

Table 11.1 Values for Road Section

No.	Category	Values
1	Cross sectional	<ul style="list-style-type: none"> - LA makers are staked at 10 m from outer edge of slope. - ROW makers are staked at 47m from land acquisition makers.
2	Longitudinal	<ul style="list-style-type: none"> - Interval of LA makers is 50m in residential area and curve sections. - Interval of the LA makers are 100m in other sections including tangent section, agriculture field and forest areas. - Interval of ROW makers are 100m in residential area and curve sections. - Interval of ROW makers are 500m in other sections including tangent section, agriculture field and forest areas.

(3) Bridge Section

Following values are applied for bridge section:

Table 11.2 Values for Bridge Section

No.	Category	Values
1	Cross sectional	<ul style="list-style-type: none"> - LA makers are staked at 10m from outer edge of parapet. - ROW makers are staked as follows: <ul style="list-style-type: none"> - 150m when length of bridge was more than 300m; - 100m when length of bridge was from 60 to 300m; - 50m when length of bridge was from 20 to 60m; - 20m when length of bridge was less than 20m;
2	Longitudinal	<ul style="list-style-type: none"> - ROW makers are staked from edge of abutment as follows: <ul style="list-style-type: none"> - 50m when length of bridge was more than 60m; - 30m when length of bridge was less than 60m;

(4) Tunnel Section

Following values are applied for tunnel section:

Table 11.3 Values for Tunnel Section

No.	Category	Values
1	Cross sectional	<ul style="list-style-type: none"> - LA of tunnel portal makers is staked at 10m from outer edge of slope. The body of tunnel shall not be staked. - ROW makers are staked at 100m from outer edge of tunnel body;
2	Longitudinal	<ul style="list-style-type: none"> - Interval of ROW makers are 500m.

12. Work Plan

The Sub-consultant shall submit the draft Work Plan not later than the time instructed by the Consultant for the checking and approval.

The Work Plan shall include:

- (1) General
- (2) Implementation Organization
- (3) Scope of Works
- (4) Method of Geotechnical Investigation
- (5) Quantity of Works (District basis)
- (6) Detailed Organization Chart of Sub-consultant, if any
- (7) List of Manpower of All Survey Groups to be Assigned
- (8) List of Equipment
- (9) Reporting
- (10) Documents to be Submitted
- (11) Work Safety
- (12) Emergency communication network
- (13) Work schedule

13. Specifications of Stakes

Specification drawing of the stake is shown in Appendix F: Technical Specifications of Stakes

(1) Land acquisition markers (LA)

- It was made of reinforced concrete class 200, 15x15x100cm size. Its body was painted by white color with engraved “GPMB” in red. Its head with 8cm long was paint by red color.
- The stake was fixed in the ground 50cm deep;
- The footing of stake was made of reinforced concrete class 150, 35x35x60cm size. It stand 10cm above existing ground;

(2) Right of way markers (ROW)

- It was made of reinforced concrete class 200, 20x20x100cm size. Its body was painted by white color with engraved “MỐC LỘ GIỚI” in red. Its head with 10cm long was paint by red color.
- The stake was fixed in the ground 50cm deep;
- The footing of stake with 40x40x60cm size was made of reinforced concrete class 150. It stand 10cm above existing ground;

(3) Other requirements

- The stakes must be prefabricated and ensured the design strength, geometric dimensions as above requirements;
- The stakes must be installed uprightly and followed cross sectional;
- When meeting some obstacles such as ponds, lakes, rivers, buildings, the stake can be removed to new stable locations. In some cases, it may be adjusted some nearby stakes to ensure that interval is not to short.

14. Supervision of the Work

The Consultant has the right to supervise all of the works and to approve the plan of operation, work methods and progress of the Work. The Consultant also has the right to accept and reject the results of the Work.

15. Other Requirements

The Sub-consultant shall arrange at his own expenses so that he may have free access to the land required for performing the Works, whether it may be under the ownership of the Government or the third parties. The Sub-contractor shall indemnify any damages to the land and associated properties.

16. Time Schedule of the Work

The Works shall be commenced immediately after signing of the Contract or the issuance of the Notice to Proceed by the Consultant. All the Work shall be completed not later than 31 July 2012.

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764

Bill of Quantities (BOQ) (1/2)

Land Acquisition and ROW Staking Works (Summary)						
No.	City/Province	LA	ROW	Total	Amount (VND)	
1	Danang	30	30	60	78,867,000	
2	Quang Nam	1,629	687	2,316	1,415,573,000	
3	Quang Ngai	340	133	473	310,500,000	
Total before VAT (round)		1,999	850	2,849	1,804,940,000	
				in USD	86,567.87	
				Rounded in USD	86,600.00	
				VAT (10%)	8,660.00	
				TOTAL	95,260.00	
Exchange Rate 1 USD =		20,850 VND				

Land Acquisition and ROW Staking Works (Danang City)							
No.	District/IC	From	To	Length	LA	ROW	Total
1	Tuy Loan IC	00+000	02+000	2000.00	30	30	60
SUB TOTAL 1					30	30	60
No.	Work items	Unit	Quantity	Unit price (VND)	Coefficient	Amount (VND)	Remarks
I Surveying, staking for ROW, LA demarcation						51,767,416	
1	Leasing stake casting and accommodation for workers	LS	1	10,000,000		10,000,000	
2	Surveying to determine stake location (with 50% unit price determined according to the unit price 1778/CGD dated 17 July 1997 by Ministry of transport)	pile	60	67,800	1,08*1,6*0,5*0,95*2,51	8,380,926	
4	Manufacturing and staking for land acquisition	pile	30	480,122		14,403,660	
5	Manufacturing and staking ROW	pile	30	562,761		16,882,830	
6	Compensation expenses for crops (temporary calculation of VND 25,000/ pile for land acquisition and building line mark)	pile	60	35,000		2,100,000	
II Transporting materials and staff to the site						11,099,808	
A group of 12 people in charge of staking for land acquisition							
1	Salary of workers during dispatching days	work	24	412,492	2*1,015*1,053*1,06	9,899,808	
2	Busticket	turn	24	50,000		1,200,000	
III Expenses for field handover (Compensation council of communes, districts)						16,000,000	
Total before VAT (round)						78,867,000	

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Bill of Quantities (BOQ) (2/2)

Land Acquisition and ROW Staking Works (Quang Nam Province)							
No.	District/IC	From	To	Length (m)	LA	ROW	Total
	Dien Ban District	17+850	20+100	2250	31	24	55
	Duy Xuyen District (1)	20+200	24+700	4500	94	58	152
	Duy Xuyen District (2)	24+700	29+465	4765	96	32	128
	Que Son District	29+465	39+650	10185	204	72	276
	Thang Binh District	39+650	52+350	12700	242	112	354
	Phu Ninh District	52+350	60+140	7790	196	100	296
	Nui Thanh District	71+100	99+200	28100	566	189	755
	My Son IC	12+880	13+810	930	40	20	60
	Ha Lam IC	40+300	41+270	970	40	20	60
	Tam Ky IC	63+980	64+930	950	40	20	60
	Chu Lai IC	82+500	83+350	850	40	20	60
	Dung Quat IC	101+250	102+200	950	40	20	60
	SUB TOTAL 2				1,629	687	2,316

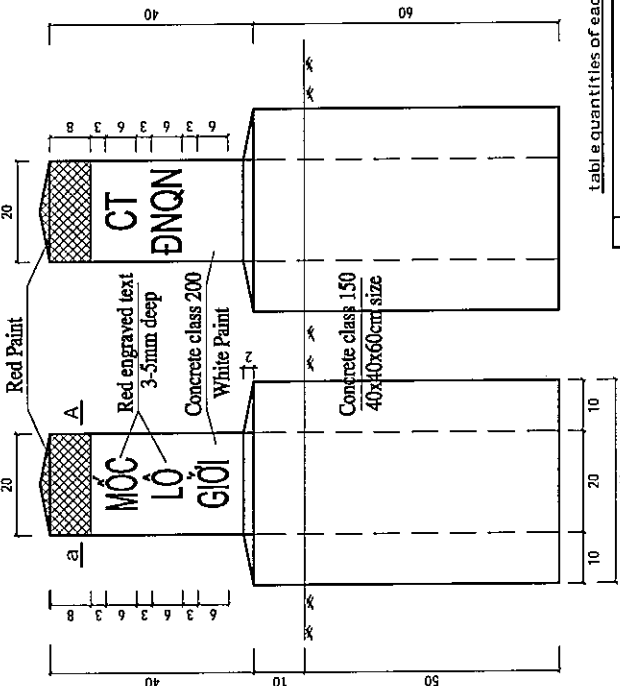
No.	Work items	Unit	Quantity	Unit price (VND)	Coefficient	Amount (VND)	Remarks
I	Surveying, staking for ROW, LA demarcation					1,378,491,518	
1	Leasing stake casting and accommodation for workers	LS	1	10,000,000		10,000,000	
2	Surveying to determine stake location (with 50% unit price determined according to the unit price 1778/CGD dated 17 July 1997 by Ministry of transport)	pile	2316	67,800	1,08*1,6*0,5*0,95*2,08	268,082,788	
4	Manufacturing and staking for land acquisition	pile	1629	419,550		683,446,950	
5	Manufacturing and staking ROW	pile	687	488,940		335,901,780	
6	Compensation expenses for crops (temporary calculation of VND 35,000/ pile for land acquisition and building line mark)	pile	2316	35,000		81,060,000	
II	Transporting materials and staff to the site					21,081,264	
	A group of 12 people in charge of staking for land acquisition						
1	Salary of workers during dispatching days	work	48	359,193		17,241,264	
2	Busticket	tum	48	80,000		3,840,000	
III	Expenses for field handover (Compensation council of communes, districts)	LS				16,000,000	
	Total before VAT (round)					1,415,573,000	

Land Acquisition and ROW Staking Works (Quang Ngai Province)							
No.	District/IC	From	To	Length	LA	ROW	Total
1	Binh Son District	99+200	110+100	10900.00	220	73	293
2	Binh Son IC	112+000	112+920	920.00	40	20	60
3	Quang Ngai North IC	123+340	124+220	880.00	40	20	60
4	Quang Ngai IC	130+050	130+870	820.00	40	20	60
	SUB TOTAL 1				340	133	473

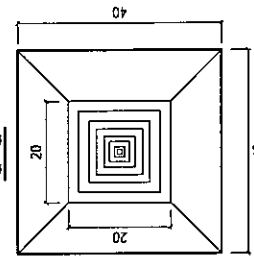
No.	Work items	Unit	Quantity	Unit price (VND)	Coefficient	Amount (VND)	Remarks
I	Surveying, staking for ROW, LA demarcation					289,349,964	
1	Leasing stake casting and accommodation for workers	LS	1	10,000,000		10,000,000	
2	Surveying to determine stake location (with 50% unit price determined according to the unit price 1778/CGD dated 17 July 1997 by Ministry of transport)	pile	473	67,800	1,08*1,6*0,5*0,95*2,08	54,750,932	
4	Manufacturing and staking for land acquisition	pile	340	420,415		142,941,200	
5	Manufacturing and staking ROW	pile	133	489,495		65,102,831	
6	Compensation expenses for crops (temporary calculation of VND 35,000/ pile for land acquisition and building line mark)	pile	473	35,000		16,555,000	
II	Transporting materials and staff to the site					5,150,312	
	A group of 12 people in charge of staking for land acquisition						
1	Salary of workers during dispatching days	work	12	359,193		4,310,312	
2	Busticket	tum	12	70,000		840,000	
III	Expenses for field handover (Compensation council of communes, districts)	LS				16,000,000	
	Total before VAT (round)					310,500,000	

right of way stake (20x20x100cm)

front view (Cross sectional direction) 2 side view (Longitudinal direction)



plan view a-a



Notes:
- All dimensions are centimeter except diameter of bars are millimeter.

Table quantities of each row stake

No	Items	Unit	Quantities
1	Concrete class 200	m3	0.040
2	Concrete class 150	m3	0.072
3	White paint twice	m2	0.480
4	Red paint twice	nos.	0.212
5	Excavation (1x1x0.5m) size	m3	0.500
6	Body of stake casing	m2	0.480
7	Footing of stake casing	m2	0.960
8	Backfill	m3	0.420
9	Engraved text	nos.	1

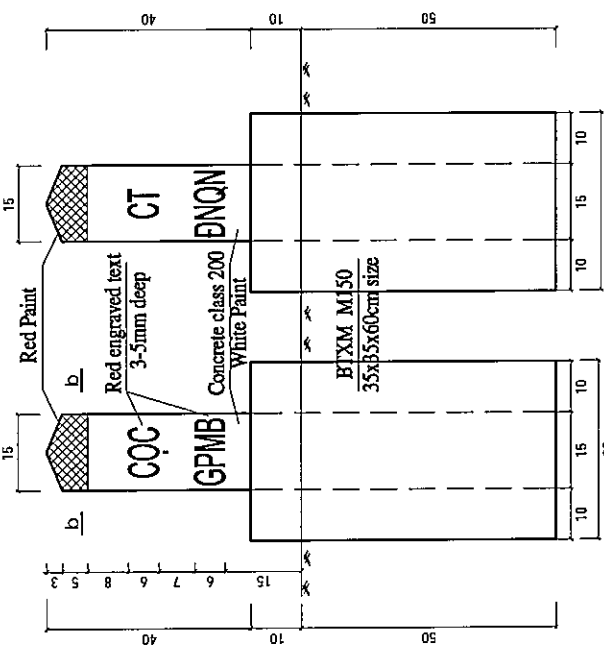
Table quantities of each Land acquisition stake

No	Items	Unit	Quantities
1	Concrete class 200	m3	0.0225
2	Concrete class 150	m3	0.0600
3	White paint twice	m2	0.360
4	Red paint twice	m2	0.143
5	Excavation (1x1x0.5m) size	m3	0.500
6	Backfill	m3	0.4388
7	Reinforcement Φ 8: 4x1.080x0.395	Kg	1.710
8	Reinforcement Φ 8: 5x0.5x0.222	Kg	0.555
9	Body of stake casing	m2	0.345
10	Footing of stake casing	m2	0.840
11	Tied steel 2%	Kg	0.045
12	Engraved text	nos.	1

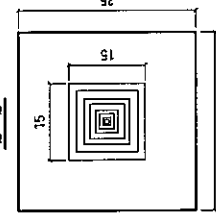
LAND ACQUISITION stake (15x15x100cm)

FRONT VIEW 2 SIDE VIEW (Cross sectional direction) (Longitudinal direction)

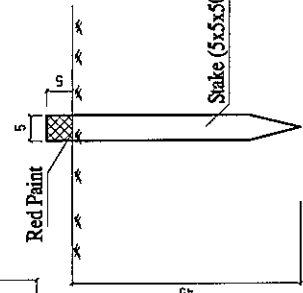
reinforcement Scale: 1:10



plan view b-b



center line stake



Stake (5x5x50)cm size

reinforcement of Land acquisition stake

No	Name of bar	Length (mm)	Number of bar (nos)	Length (m)	unit weight (kg/m)	total weight (kg)
1	n1	100	4	4.00	0.395	1.58
2	n2	648	5	2.40	0.222	0.53
total						2.11

MINISTRY OF TRANSPORT VIETNAM		ENGINEERING DESIGN CONSULTANT		REMARKS:		COORDINATES ARE IN VN2000 CENTER MEDIAN 108 ° K=0.999	
CLIENT	PROJECT MANAGEMENT CONSULTANT	The Joint Venture of Nippon Engineering Consultants Co., Ltd. and Chedal Co., Ltd.		PREPARED BY	CHECKED BY	APPROVED BY	Package:
VIETNAM EXPRESSWAY CORPORATION	PROJECT MANAGEMENT UNIT NO.5	The Engineering Consultants Co., Ltd.		NAME	SIGNATURE	DATE	Station:
				DA NANG-QUANG NGAI EXPRESSWAY DEVELOPMENT PROJECT		DETAILS OF ROW STAKE	
				SCALE		DRAWING NO.	
				REV. NO.			

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204