

Project Administration Manual

Project Number: 40080-025
Loan Number:
October 2015

Socialist Republic of Viet Nam: Hanoi Metro Rail
System Project (Line 3: Nhon – Ha Noi Station
Section) Additional Financing

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ANNEX 1: TERMS OF REFERENCE FOR PMS-PHASE 2

Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with government of Viet Nam (Government) and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ha Noi People's Committee (HPC) and Ha Noi Metropolitan Railway Management Board (MRB) are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by HPC and MRB of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the PAM and ensure consistency with the Loan agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP) changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the ADB Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.

Abbreviations

ADB	=	Asian Development Bank
ADF	=	Asian Development Fund
AFD	=	Agence Française de Développement
AFS	=	Audited financial statements
AP	=	Affected Persons
CIF	=	Climate Investment Fund
CQS	=	consultant qualification selection
CTF	=	Clean Technology Fund
DGT	=	Direction Générale du Trésor
DMF	=	design and monitoring framework
DSC	=	design and supervision consultant
EIA	=	environmental impact assessment
EIB	=	European Investment Bank
EMP	=	environmental management plan
ESMS	=	environmental and social management system
FDIC	=	International Federation of Consulting Engineers
GDP	=	gross domestic product
HPC	=	Ha Noi People's Committee
ICB	=	international competitive bidding
IEE	=	Initial environmental examination
LAR	=	land acquisition and resettlement
LIBOR	=	London interbank offered rate
MOF	=	Ministry of Finance
MPII	=	Ministry of Planning and Investment
MRB	=	Hanoi Metropolitan Railway Management Board
NCB	=	national competitive bidding
NGOs	=	nongovernment organizations
PAI	=	project administration instructions
PAM	=	project administration manual
PID	=	project implementation division
PMU	=	project management unit
QBS	=	quality based selection
QCBS	=	quality- and cost based selection
RRP	=	report and recommendation of the President to the Board
SBD	=	standard bidding documents
SBV	=	State Bank of Vietnam
SGIA	=	second generation imprest accounts
SOE	=	statement of expenditure
SPS	=	Safeguard Policy Statement
SPRSS	=	summary poverty reduction and social strategy
TOR	=	terms of reference

NOTES

In this report, "\$" refers to US dollars.

I. PROJECT DESCRIPTION

1. The Ha Noi Metro Rail System Project (Line 3: Nhon–Ha Noi station section) is to develop: (i) a 12.5 kilometer (km) long dual track rail line from Nhon to Ha Noi main railway station¹; and (ii) electrical and mechanical (E&M) systems, including all railway systems required to operate a modern metro line. In addition, support will be provided for detailed design, procurement, construction supervision, design verification, project management and capacity development.

2. The Metro Line 3 is one of four priority rail lines under the Ha Noi Urban Transport Master Plan (HUTMP) until 2020 in accordance with Prime Minister’s Decision No.90/2008/QĐ-DTG of 9 July 2008. Metro Line 3 will facilitate public transport connectivity, enhance access in six Ha Noi districts and form an integral part of an improved public transport system that aims to increase the modal share of public transport to 40% of demand, through low-carbon transport that reduces greenhouse gas emissions. The executing agency (EA) is the Ha Noi People’s Committee (HPC) and the implementing agency (IA) is the Ha Noi Metropolitan Railway Management Board (MRB).

3. The impact of the project will be the establishment of an integrated sustainable public transport system in six districts of Ha Noi.² The outcome will be competitive metro rail services along the project corridor. The project outputs will be: (i) Metro Line 3 is operational; and (ii) improved implementation capacity of MRB.³

(i) **Component 1 - Metro Line 3 System Development:** including all Works and E&M systems for Metro line 3, from Nhon depot in the west to Ga Ha Noi measuring (a) approximately 12.5 km in length, of which about 3.5 km is underground, about 8.5 km will be elevated and about 500 meters will be in transition ramp; and (b) depot and ancillary buildings, elevated viaducts, transition tunnel portal, bored tunnels, and 12 stations. The Works portion of this component includes all civil, structural, building services, architectural/builders work and all necessary utility services to the works. The E&M system portion of this component includes all railway systems including track work, rolling stock, traction power, signaling and telecommunications, E&M systems and facilities, and ticketing system and ancillary services and facilities required to operate a modern Metro line.

(ii) **Component 2 – Implementation Support:** supporting to MRB to improve metro development, implementation and operations capacity by providing skills in specific technical disciplines and knowledge transfer of these skills to MRB staff through on-the-job training and workshops, and addressing organizational, functional, and technical capacity shortfalls.

4. Asian Development Bank (ADB) provided technical assistance for initial feasibility study of the project.⁴ The original ADB loan of \$293 million from ordinary capital resources (OCR)

¹ The rail system included 3.5 km underground, 8.5 km elevated, and 500 m in a transition ramp, including a depot with ancillary buildings at Nhon, elevated viaducts, transition tunnel portal, bored tunnels, and 12 stations.

² Number of districts increased from five to six as Tu Liem was split into Tu Liem North and Tu Liem South in 2012.

³ At time of loan approval in 2011, MRB was named Ha Noi Metropolitan Rail Transport Project Board.

⁴ ADB. 2006. *Technical Assistance to the Socialist Republic of Viet Nam for Preparing the Ha Noi Metro Rail System Project*. Manila (TA 4900-VIE). The feasibility study was subsequently updated and completed by DGT-funded consultants.

financing for the project was approved on 29 March 2011, and made effective on 13 March 2012. With cofinancing from Agence Française de Développement (AFD) for €110 million, Direction Générale du Trésor (DGT) for €250 million and European Investment Bank (EIB) for €73 million, nine civil work and equipment contracts and four consulting services contracts have been financed. ADB finances one civil works contract for the tunnel section and four underground stations.⁵

5. **Project Progress.** The project faced start-up delays due to slow progress in land acquisition and resettlement (LAR), and delays in design and procurement. To date, four out of total nine contract packages (CP) for civil works and equipment have been awarded, with current progress of about 14% for CP1, 21% for CP2, 90% for CP4 and 23% for CP5. The depot⁶ and 8 km elevated section is expected to be completed in late 2016. There are still five contracts under procurement. The contract award of the ADB financed contract package CP03 is expected to be awarded in October 2015 to complete civil works by mid-2019. All other contracts are expected to be awarded by end 2015. All works on the Metro Line 3 expect to be completed by end 2019.

6. **Rationale of Additional Financing.** The 2009 approved feasibility study estimated the overall project cost at \$990.5 million equivalent.⁷ Detailed design and updated cost estimates were completed by the project implementation consultant in March 2012 under DGT financing. However, delays and cost increases caused by design changes, audits, incompetent contractors, removal of existing utility lines, preparation and implementation of resettlement plans and site clearance, as well as continued price escalation, has raised the project cost to the current estimate of \$1,375.7million equivalent.⁸ The Government of Viet Nam (the Government) approved the revised Project Outlines on 5 and 23 December 2014, which authorize increases in official development aid financing.⁹ This will ensure that the project will complete in 2019 by promptly addressing unexpected constraints using the additional financing to achieve the government's economic development objectives addressed in the HUTMP.

7. Additional loans from AFD in the amount of €69.0 million and from DGT in the amount of €85.0 million were approved in December 2014. EIB's proposed additional loan of €70.0 million expects to be approved by end of 2015. The Government has requested ADB to provide additional financing of \$59.0 million from ADB's OCR and \$50.0 million from Clean Technology Fund (CTF) to finance potential future cost increases in its civil works package, and \$5.8 million from ADB's Asian Development Fund (ADF) resources, to finance consulting services for project management support. The Government's application for CTF financing was approved by the CTF Trust Fund Committee on 28 October 2014. With the current exchange rate, the additional financing provided by the co-financiers is likely to be sufficient to take the project to completion. The Government has committed to providing additional counterpart funds to finance any further costs increases as needed.

⁵ ADB originally had two contracts to finance, with one of them jointly with AFD. This has undergone restructuring and ADB currently has only one contract, to be fully financed by ADB source.

⁶ A depot, including ancillary buildings/ infrastructure for overnight parking and servicing of trains is built in Nhon with AFD financing under the project.

⁷ This proposal uses the exchange rate, €1.0 = \$1.1 as of August 2015, to convert financial figures, including finances to be provided by the cofinanciers in Euro currency. The current project used the exchange rate, €1.0 = \$1.3 as of February 2011, to exhibit the overall project cost, including cofinanciers' amounts in Euro currency, which was at \$1,077.2 million.

⁸ It is noted that the civil works costs may increase due to the existing houses and buildings as obstacles above the tunnel section. Before starting tunnel boring, CP3 contractor will identify obstacles based on a preliminary assessment and develop detailed work plan including schedule, costs, and actions for LAR.

⁹ Approved by Prime Minister as shown in Ref. No. 2322/QD-TTg and Ref. No. 2186/QD-TTg.

8. The project will finance the first tunnel contract ever implemented in Ha Noi, which requires strong international technical and project management expertise. Given the high degree of complexity of the project, MRB's staff still requires continuous and substantial support on managing the project's daily activities to ensure that the project will be implemented in compliance with the cofinanciers' requirements and with high international quality standards. The consulting services for PMS-phase 1 have been financed by AFD, with original contract expiry date of 30 June 2014. ADB has agreed to finance PMS-phase 2 from its proposed additional financing. To ensure continuity of the PMS services, especially for implementation of the LAR activities, AFD agreed to extend the contract of the current PMS-phase 1 consultant until 30 September 2015, with an expectation that ADB mobilizes PMS-phase 2 consultant soon after.

9. In accordance with OM H5/OP, para 39, the project is considered to be not performing well as: (i) expected outputs are being delivered 4 years after original schedule, and (ii) contract award and disbursement are significantly behind schedule, with no ADB contract awarded. Therefore, the project will undergo a strict business process. A concept review for additional financing for the project was conducted based on OM H5/OP, paras. 40 and 49 to 52. Options to restructure the project were examined. Due to the need to connect a depot in a suburb to a major central interchange, it is not practical to scale down the project to remain within the original financing. This would result in a significant loss of benefits. The due diligence for the increased cost demonstrates that the project remains technically feasible, economically viable with an economic rate of return above 12% but with a financial return of negative 1.22%, below the weighted cost of capital of 0.70%. To ensure that the project is financially sustainable, HPC has committed to maintaining the necessary subsidy throughout the project life of the Metro, as is the normal case for most Metro systems around the world.

10. There has been no unsatisfactory compliance with social loan covenants while compliance for environment is generally satisfactory. Financial covenants have not been complied with as audited financial statements of the cofinanciers' project accounts have not been produced for 2012, 2013 and 2014. Initial delays in LAR implementation have been mitigated, with resettlement for the depot and access road near to completion and resettlement plans for the underground section being finalized. The ADB-cleared environmental monitoring plans have been incorporated into all works contracts, and monitoring reports are being provided and disclosed. To ensure the project's compliance with financial covenants withdrawals from the loan account for consulting services are not allowed until the government submits to ADB the audited financial statements for the original project for the years 2012, 2013, and 2014. However, as the main issues hindering progress on project implementation have been mitigated and the risks addressed, the project performance is anticipated to remain satisfactory until completion. Therefore, the option to provide additional financing is recommended. The proposed additional loan is included in the Country Operations Business Plan for 2015-2017.¹⁰

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

11. ADB approved the concept paper for the additional financing of the tunneling and the

¹⁰ ADB. 2014. *Country Operations and Business Plan: Viet Nam, 2015-2017*. Manila.

underground stations on 18 March 2015.¹¹ The project readiness activities are described below.

Indicative Activities		2015						2016						Who Responsible		
		6	7	8	9	10	11	12	1	2	3	4	5		6	
1	Advance contracting actions					X										ADB, MRB HPC
2	Loan negotiations					X										ADB, SBV, MRB, HPC
3	ADB Board approval							X								ADB
4	Loan signing									X						SBV, ADB
5	Government legal opinion provided											X				SBV, MOJ
6	Government budget inclusion											X				MRB, HPC, MPI, MOF
7	Loan effectiveness												X			ADB

ADB = Asian Development Bank, HPC = Ha Noi People's Committee, MRB = Ha Noi Metropolitan Railway Management Board, MOJ= Ministry of Justice, SBV = State Bank of Vietnam

B. Overall Project Implementation Plan

12. The physical implementation of the Project will be extended until June 2019. The Loan financial closing date is 31 December 2019. The overall Project Implementation Plan is shown in Table 2.1.

¹¹ Each donor will have its own approval process for the additional financing proposed under their own component.

Figure 2.1: Revised Implementation Plan

Indicative Activities	2012-2015	2016				2017				2018				2019			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A. DMF																	
Output 1: Metro line 3 is operational																	
1.1 Implementation of civil works – all contracts awarded by June 2015 and completed by June 2019.																	
1.2 Provision and installation of E&M systems and rolling stock – all contracts awarded by June 2015, completed by December 2018, and system commissioned by December 2019.																	
1.3 Land acquisition – all land acquisition and resettlement completed by July 2015																	
Output 2: Improved implementation capacity of MRB¹²																	
2.3 Recruitment of Project Management Support – Phase 2 by June 2016																	
A. Management Activities																	
Procurement plan key activities to procure contract packages																	
Consultant selection procedures																	
Environment management plan key activities																	
Gender action plan key activities																	
Communication strategy key activities																	
Annual/Mid-term review					MTR												
Project completion report																	

¹² Activities 2.1 and 2.2 are already completed.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations – Roles and Responsibilities

13. The Ha Noi People's Committee (EA) has established a major projects steering committee for the Metro system development in Ha Noi, chaired by the vice chairman of HPC, which is responsible for project oversight and coordination. MRB is responsible for overseeing the planning, design and implementation of the Metro system. An Operation and Maintenance Company under HPC has been established in 2014 to be responsible for the operation and maintenance of the Ha Noi Metro system. MRB management was reorganized in October 2012. The Project Management Unit 1, within MRB, is responsible for the day-to-day management, including and coordination with the districts that are affected by the Project LAR activities. The table below reflects the different agencies involved in the project and their management roles and responsibilities.

Project implementation organizations	Management Roles and Responsibilities
<ul style="list-style-type: none"> • Government 	<ul style="list-style-type: none"> ➤ Sign the Loan Agreement ➤ Monitor of the investment program implementation and provide respective coordination and facilitation ➤ Allocate and release counterpart funds ➤ Endorse to ADB the authorized staff with approved signatures for withdrawal application processing ➤ Process and submit to ADB any request, when required, for reallocating the loan proceeds ➤ Compliance with loan covenants
<ul style="list-style-type: none"> • Ha Noi People's Committee / Project Steering Committee 	<ul style="list-style-type: none"> ➤ Overall responsibility for execution of the project ➤ Review the Project implementation progress ➤ Provide policy guidance to MRB ➤ Monitor and coordinate different agency activities ➤ Review and endorse any proposed changes in project scope ➤ Compliance with loan covenants ➤ Provide oversight on transport policies and regulations. ➤ Approval of major change in scope of project components
<ul style="list-style-type: none"> • Hanoi Metropolitan Railway Management Board (MRB) 	<ul style="list-style-type: none"> ➤ Establishment of project implementation division ➤ Timely provision of agreed counterpart funds for project activities ➤ Involving beneficiaries and civil society representatives in all stages of project design and implementation ➤ Public disclosure of project outputs ➤ Quality assurance of works and services of consultants and counterpart staff ➤ Establishing strong financial management system and submitting timely withdrawal applications to ADB, conducting timely financial audits as per agreed timeframe and taking recommended actions ➤ Approval of award of contracts for civil works and consultant services within approved procurement plan

Project implementation organizations	Management Roles and Responsibilities
<ul style="list-style-type: none"> • MRB Project Management Unit 1 	<ul style="list-style-type: none"> ➤ Complying with all loan covenants (urban transport sector reforms, social and environmental safeguards, financial, economic, and others) ➤ Ensuring projects' sustainability during post implementation stage and reporting to ADB on the assessed development impacts ➤ Management of Imprest Accounts ➤ Recruiting consultants ➤ Finalizing survey, detailed design, bidding documents and contract awards ➤ Monitoring and evaluation of project activities and outputs, including periodic review, preparation of review reports identifying issues and action plans ➤ Preparing regular periodic progress reports, and project completion reports and their timely submission to ADB.
<ul style="list-style-type: none"> • Asian Development Bank 	<ul style="list-style-type: none"> ➤ Assist MRB and its PMU/PID in providing timely guidance at each stage of the program for implementation in accordance with the agreed implementation arrangements ➤ Review all the documents that require ADB approval ➤ Approve the procurement activities ➤ Conduct periodic loan review missions, a mid-term review, a completion mission for each project under the program, and an overall program completion mission ➤ Ensure compliance of all loan covenants (transport sector reforms, social and environmental safeguards, financial, economic, and others) ➤ Timely process withdrawal applications and release eligible funds ➤ Ensure the compliance of financial audit recommendations ➤ Regularly update the project performance review reports with assistance of MRB ➤ Regularly post on ADB website the updated project information documents for public disclosure, and also the safeguards documents as per disclosure provision of the ADB safeguards policy statement
<ul style="list-style-type: none"> • Other Donors (AFD, CTF, DGT,EIB) 	<ul style="list-style-type: none"> ➤ Provide collaborative cofinancing for the different project components, e.g., civil works, equipment and capacity building ➤ Assist MRB and its PMU/PID in providing timely guidance at each stage of the program for implementation in accordance with the agreed implementation arrangements ➤ Review all the documents that require the donor approval ➤ Approve the procurement activities ➤ Conduct periodic loan review missions, a mid-term review, a completion mission for each project under the program, and an overall program completion mission

Project implementation organizations	Management Roles and Responsibilities
<ul style="list-style-type: none"> • Operations and Maintenance (O&M) • Public Transport Authority (PTA) 	<ul style="list-style-type: none"> ➤ Ensure compliance of all loan covenants (transport sector reforms, social and environmental safeguards, financial, economic, and others) ➤ Timely process withdrawal applications and release eligible funds ➤ Ensure the compliance of financial audit recommendations ➤ Regularly update the project performance review reports with assistance of MRB ➤ To Develop of the necessary actions for the optimal management of a Metro system, focusing on the safety and quality of service to citizenship. ➤ To carry out all necessary actions for retaining or restoring a piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life. ➤ Responsible for planning, developing and regulating all public transport modes in Ha Noi, including the metro system

B. Key Persons Involved in Implementation

Executing Agency HPC

Vice Chairman HPC
12 Le Lai, Ly Thai To Ward
Ha Noi
+84-4 38.253 536

Implementing Agency MRB

Nguyen Quang Manh
General Director
8 Ho Xuan Huong,
Ha Noi
+844 39.435 227

Project Management Unit 1, MRB

Le Huy Hoang
Director
8 Ho Xuan Huong,
Ha Noi
+844 39.435 227

ADB

Transport and Communications
Division, Southeast Asia Department

Hideaki Iwasaki
Director
+63 2 632 6433
hiwasaki@adb.org

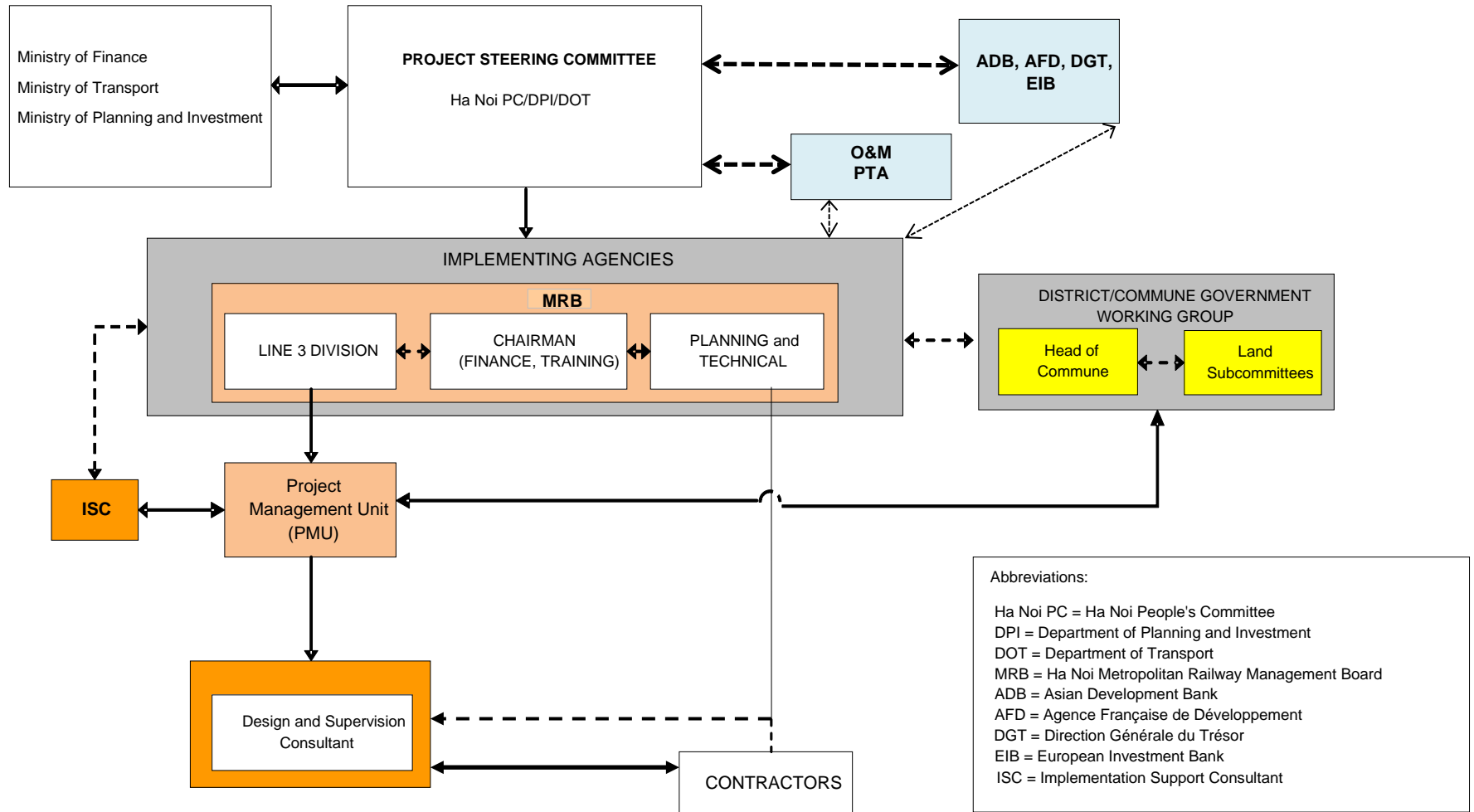
Mission Leader
(outposted in Viet Nam Resident
Mission)

Arto Ahonen
Senior Transport Specialist
+84 4 3931 1374 Ext 164.
aahonen@adb.org

C. Project Organization Structure

14. Figure 3.1 depicts the project organization structure. The organizational structure of HPC agencies for planning, development and regulation of the public transport system is being strengthened with clear assignment of responsibilities to ensure affectivity of the HUTMP objectives. Presently the Project Management Units (PMU) for different projects report to different agencies. This is under consideration for improvement, but in the meantime HPC will implement strategic policies for the transport system to ensure (i) the integration of Line 3 with other lines and modes is well developed, (ii) metro standards and O&M are developed by MRB under the TA projects currently funded by AFD and DGT, (iii) discussions are taking place on integrated fares and ticketing and (iv) the overall levels of capital and recurrent funding requirements for the implementation and operation of the whole public transport system are not being reviewed.

Figure 3.1 Organization Chart



IV. COSTS AND FINANCING

15. Based on the current Euro/USD exchange rate, the original overall project cost estimates was \$990.5 million equivalent. As a result of expected cost increase of civil works and potential LAR, the project is now estimated to cost \$1,375.7 million equivalent (Table 4.1).

Table 4.1: Project Investment Plan
(\$ million)

Item	Current Amount ^a	Additional Financing ^b	Total
A. Base Cost^c			
1. Metro Line 3 Construction			
a. Civil works	401.5	75.1	476.6
b. Equipment and systems	275.2	156.7	431.9
c. Land acquisition and resettlement	24.3	2.6	26.9
2. Implementation Support			
a. Consulting services	47.4	42.4	89.8
b. Incremental administration	35.2	0.0	35.2
Subtotal (A)	783.6	276.8	1,060.4
B. Contingencies^d	147.7	105.7	253.4
C. Financing Charges During Implementation^e	59.2	2.8	62.0
Total (A+B+C)	990.5	385.2	1,375.7

^a Includes taxes and duties of \$71.0 million financed from government resources.

^b Includes taxes and duties of \$21.3 million to be financed from government resources. Taxes and duties will be exempted. ADB and CTF loans may finance local transportation and insurance costs.

^c In mid-2015 prices.

^d Physical contingencies computed at 30% for civil works and 6% for consulting services; Price contingencies computed at 5% on foreign exchange costs and 15% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

Includes interest and commitment charges. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

^e Includes interest and commitment charges. ADB ordinary capital resources: Interest during construction for ADB loan(s) has been computed at 5-year (corresponding to the implementation period) USD fixed swap rate plus a spread of 0.50%, commitment charges are 0.15% per year to be charged on the undisbursed loan amount; ADB Special Funds resources: interest rate of 2.0% per annum during the grace period and thereafter; and CTF: interest charge of 0.25% and a management fee of 0.18% of per annum.

ADB = Asian Development Bank, CTF = Clean Technology Fund.

Source: Asian Development Bank and Government estimates.

16. The overall ADB project cost comprises \$293.0 million of ADB's existing financing and proposed additional financing from ADB and CTF of \$114.8 million. The additional ADB and CTF loans will finance the expected cost increase of the civil works and will also finance consulting services for PMS-phase 2, excluding any taxes and duties to be imposed on the works and services, and financing charges during implementation. All financing charges are to be capitalized.

17. Under the parallel collaborative cofinancing arrangement, additional loans from AFD in the amount of €69.0 million (\$75.9 million equivalent), from DGT in the amount of €35.0 million (\$93.5 million equivalent), and from EIB in the expected amount of €70.0 million (\$77.0 million equivalent) will finance the expected cost increase of the civil works, electrical and mechanical systems, rolling stock, and consulting services. The cofinanciers' financing of the project's investment plan and collaboration with ADB will be subject to the satisfactory conclusion of their internal approval processes.

18. The Government's additional counterpart funds, €21.8 million (\$24.0 million equivalent), will finance taxes and duties, any additional LAR costs, and utility lines diversion, according to the cost estimates approved by the Prime Minister in December 2014.

19. The Borrower of the additional ADB and CTF loans will be the Government. The Government will on-lend the entire loan proceeds to HPC under the subsidiary financing agreement, as acceptable to ADB. The financing plan is in Table 4.2.

20. The Government has requested a loan equivalent of \$59.0 million from ADB's OCR and a loan in various currencies equivalent to SDR 4,107,000.00 (\$5.8 million equivalent) from ADB's Special Funds resources, to help finance the project. The OCR loan will have a 20-year term, including a grace period of 5 years, an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan and project agreements. The ADF loan will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per annum during the grace period and thereafter, and such other terms and conditions set forth in the draft loan and project agreements. The CTF will cofinance the project with a loan of \$50 million with a 40-year term, including a grace period of 10 years, a management fee of 0.18% per annum on the undisbursed balance of the loan, and an interest charge of 0.25%.¹³ ADB will administer the CTF loan in accordance with the CTF loan agreement between ADB and the Government. The interest and other charges during construction, as applicable, will be capitalized in the loans.

Table 4.2: Financing Plan^a

Source	Current ^a			Additional Financing		Total	
	Amount (\$ million)		Share of Total (%)	Amount (\$ million)	Share of Total (%)	Amount (\$ million)	Share of Total (%)
	As of Feb 2011	As of Aug 2015					
ADB	293.0	293.0		64.8	16.8	357.8	26.0
OCR (loan)	293.0	293.0	29.6	59.0	15.3	352.0	25.6
ADF (loan)	0.0	0.0	0.0	5.8	1.5	5.8	0.4
CTF	0.0	0.0	0.0	50.0	13.0	50.0	3.7
AFD	143.0	121.0	12.2	75.9	19.7	196.9	14.3
DGT	325.0	275.0	27.8	93.5	24.3	368.5	26.8
EIB	95.0	80.3	8.1	77.0	20.0	157.3	11.4
Government	221.2	221.2	22.3	24.0	6.2	245.2	17.8
Total	1,077.2	990.5	100.0	385.2	100.0	1,375.7	100.0

ADB = Asian Development Bank, ADF = Asian Development Fund, AFD = Agence Française de Développement, CTF = Clean Technology Fund, DGT = Direction Générale du Trésor, EIB = European Investment Bank, OCR = ordinary capital resources.

^a The current amounts are shown by the figures based on the euro–US dollar exchange rates as of February 2011 when the current project was approved and as of August 2015 when the proposal for additional financing was being prepared. The additional financing and total amounts are based on the August 2015 exchange rate.

Source: Asian Development Bank and government estimates.

¹³ The project has been allocated \$50 million from the approved Viet Nam Investment Plan.

A. Detailed Cost Estimates by Expenditure Category (in \$ million)

Item	Current Amount ^a	% of Base Cost	Additional Financing ^b	% of Base Cost	Total	% of Base Cost
A. Base Costs^c						
1. Metro Line 3 Construction						
a. Civil Works	401.5	51.2%	75.1	27.1%	476.6	44.9%
b. Equipment and Systems	275.2	35.1%	156.7	56.6%	431.9	40.7%
c. Land Acquisition, Resettlement, and Utilities Relocation	24.3	3.1%	2.6	1.0%	26.9	2.5%
2. Implementation Support						
a. Consulting Services	47.4	6.0%	42.4	15.3%	89.8	8.5%
b. Incremental administration	35.2	4.5%	0.0	0.0%	35.2	3.3%
Subtotal (A)	783.6	100.0%	276.8	100.0%	1,060.4	100.0%
B. Contingencies^d						
1. Physical and Price	147.7	18.8%	105.7	38.2%	253.4	23.9%
Subtotal (B)	147.7	18.8%	105.7	38.2%	253.4	23.9%
C. Financing Charges During Implementation						
1. Interest During Implementation including Commitment Charges	59.2	7.6%	2.8	1.0%	62.0	5.8%
Subtotal (C)	59.2	7.6%	2.8	1.0%	62.0	5.8%
Total Project Cost (A+B+C)	990.5	126.4%	385.2	139.2%	1,375.7	129.7%

^a Includes taxes and duties of \$ \$71.0 million financed from government resources.

^b Includes taxes and duties of \$21.3 million to be financed from government resources. Taxes and duties will be exempted. ADB and CTF loans may finance local transportation and insurance costs.

^c In mid-2015 prices.

^d Physical contingencies computed at 30% for civil works and 6% for consulting services; Price contingencies computed at 5% on foreign exchange costs and 15% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^e Includes interest and commitment charges. ADB ordinary capital resources: Interest during construction for ADB loan(s) has been computed at 5-year (corresponding to the implementation period) USD fixed swap rate plus a spread of 0.50%, commitment charges are 0.15% per year to be charged on the undisbursed loan amount; ADB Special Funds resources: interest rate of 2.0% per annum during the grace period and thereafter; and CTF: interest charge of 0.25% and a management fee of 0.18% of per annum.

ADB = Asian Development Bank, CTF = Clean Technology Fund.

Source: Asian Development Bank and Government estimates.

B. Allocation and Withdrawal of Loan Proceeds

21. Loan allocation schedule for ADB-financed and ADB-administered Loan are reflected below.

Allocation and Withdrawal of Loan Proceeds (Ha Noi Metro Rail system Project (Line 3: Nhon-Hanoi Station Section) - Current Loan (Ordinary Capital Resources)			
Number	Item	Total Amount Allocated for ADB Financing (\$) Category	Basis for Withdrawal from the Loan Amount
1	Works	243,500,000	100% of total expenditures claimed*
2	Interest and Commitment Charges during Construction	18,500,000	100% of amounts due
3	Unallocated	31,000,000	
	Total	293,000,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower

Allocation and Withdrawal of Loan Proceeds (Ha Noi Metro Rail system Project (Line 3: Nhon-Hanoi Station Section) - Additional Financing (Ordinary Capital Resources)			
Number	Item	Total Amount Allocated for ADB Financing (\$) Category	Basis for Withdrawal from the Loan Amount
1	Works	37,300,000	100% of total expenditures claimed*
2	Interest and Commitment Charges during Construction	1,900,000	100% of amounts due
3	Unallocated	19,800,000	
	Total	59,000,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower

Allocation and Withdrawal of Loan Proceeds (Ha Noi Metro Rail system Project (Line 3: Nhon-Hanoi Station Section) - Additional Financing (Special Operations)			
Number	Item	Total Amount Allocated for ADB Financing (SDR) Category	Basis for Withdrawal from the Loan Amount
1	Consulting Services**	3,328,000	100% of total expenditures claimed*
2	Interest Charge	184,000	100% of amounts due
3	Unallocated	595,000	
	Total	4,107,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower

** Subject to the condition for withdrawal described in paragraph 6 of Schedule 3 of the Loan Agreement.

Allocation and Withdrawal of Loan Proceeds (Ha Noi Metro Rail system Project (Line 3: Nhon-Hanoi Station Section) - Additional Financing (Clean Technology Fund)			
Number	Item	Total Amount Allocated for ADB Financing (\$) Category	Basis for Withdrawal from the Loan Amount
1	Works	31,600,000	100% of total expenditures claimed*
2	Interest Charge and Management Fee	600,000	100% of amounts due
3	Unallocated	17,800,000	
	Total	50,000,000	

* Exclusive of taxes and duties imposed within the territory of the Borrower; to be disbursed on front-loading basis

C. Detailed Cost Estimates by Financier

Table C.1 Detailed Cost Estimates by Financier, Current Loan (in \$ million)

Item	ADB (OCR)		AFD		DGT		EIB		GoV				Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	Amount (Taxes and Duties)	Amount Total	%	
A. Base Costs													
1. Metro Line 3 Construction													
a. Civil Works													
i. Underground Tunnel and Stations	243.5	90.9%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	24.4	24.4	9.1%	267.9
ii. Elevated Sections, Depot, and Rail works ^a	0.0	0.0%	77.8	58.2%	0.0	0.0%	41.7	31.2%	0.0	14.1	14.1	10.6%	133.6
b. Equipment and Systems, Rolling Stocks	0.0	0.0%	18.6	6.8%	199.6	72.5%	27.9	10.1%	0.0	29.1	29.1	10.6%	275.2
c. Land Acquisition, Resettlement, and Utilities Relocation	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	24.3	0.0	24.3	100.0%	24.3
2. Implementation Support													
a. Consulting Services													
i. Consulting Services - Other Cofinancing	0.0	0.0%	6.2	13.0%	37.8	79.7%	0.0	0.0%	0.0	3.4	3.4	7.3%	47.4
b. Incremental administration	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	35.2	0.0	35.2	100.0%	35.2
Subtotal (A)	243.5		102.6		237.4		69.6		59.5	71.0	130.5	16.7%	783.6
B. Contingencies^d													
1. Physical and Price	31.0	21.0%	18.5	12.5%	37.6	25.4%	10.7	7.2%	0.0	50.0	50.0	33.9%	147.7
Subtotal (B)	31.0	21.0%	18.5	12.5%	37.6	25.4%	10.7	7.2%	0.0	50.0	50.0	33.9%	147.7
C. Financing Charges During Implementation													
1. Interest During Implementation including Commitment Charges	18.5	31.3%	0.0	0.0%	0.0	0.0%	0.0	0.0%	40.7	0.0	40.7	68.8%	59.2
Subtotal (C)	18.5		0.0		0.0		0.0		40.7	0.0	40.7	68.8%	59.2
Total Project Cost (A+B+C)	293.0		121.0		275.0		80.3				221.2		990.5
% of Total Project Cost	29.6%		12.2%		27.8%		8.1%				22.3%		100.0%

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to item A.1.a.(i) Underground tunnels and stations subcomponent.

ADB = Asian Development Bank, AFD= Agence Francaise de Developpment, DGT=Direction Generale du Tresor, EIB=European Investment Bank , GoV= Government of Viet Nam

Source: Asian Development Bank and Government estimates.

Table C.2 Detailed Cost Estimates by Financier, Additional Loan (in \$ million)

Item	ADB (OCR)		ADB (ADF)		ADB (CTF)		AFD		DGT		EIB		GoV			Total		
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	Amount (Taxes and Duties)	Amount Total		%	
A. Base Costs																		
1. Metro Line 3 Construction																		
a. Civil Works																		
i. Underground Tunnel and Stations ^a	37.31	0.50	0.00	0.00	31.62	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.15	6.15	0.08	75.08
ii. Elevated Sections, Depot, and Rail works ^b	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
b. Equipment and Systems, Rolling Stocks	0.00	0.00	0.00	0.00	0.00	0.00	57.23	0.37	27.63	0.18	58.97	0.38	0.00	12.82	12.82	0.08	156.65	
c. Land Acquisition, Resettlement, and Utilities Relocation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.00	2.63	1.00	2.63	
2. Implementation Support																		
a. Consulting Services																		
i. Consulting Services - PMS Phase 2	0.00	0.00	4.70	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.26	0.05	4.96	
2. Consulting Services - Other Cofinancing	0.00	0.00	0.00	0.00	0.00	0.00	5.20	0.14	30.13	0.81	0.00	0.00	0.00	2.08	2.08	0.06	37.41	
b. Incremental administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Subtotal (A)	37.31		4.70		31.62		62.43		57.76		58.97		2.63	21.31	23.94	0.09	276.73	
B. Contingencies																		
1. Physical and Price	19.8	0.2	0.8	0.0	17.8	0.2	13.5	0.1	35.7	0.3	18.0	0.2	0.0	0.0	0.0	0.0	0.0	105.7
Subtotal (B)	19.8	0.2	0.8	0.0	17.8	0.2	13.5	0.1	35.7	0.3	18.0	0.2	0.0	0.0	0.0	0.0	0.0	105.7
C. Financing Charges During Implementation																		
1. Interest During Implementation including Commitment Charges	1.9	68.8%	0.3	9.4%	0.6	21.7%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0	0.0	0.0	0.0%	2.8
Subtotal (C)	1.9	68.8%	0.3	9.4%	0.6	21.7%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0	0.0	0.0	0.0%	2.8
Total Project Cost (A+B+C)	59.0		5.8		50.0		75.9		93.5		77.0		2.6	21.3	23.9		385.2	
% of Total Project Cost	15.3%		1.5%		13.0%		19.7%		24.3%		20.0%						6.2%	100.0%

^aIn relation to disbursement order, A.1.a.(i) of the original loan will be disbursed first prior to the disbursement of the loan proceeds from the additional financing. The Loan proceeds from ADB CTF will be front-loaded prior to the disbursement of the loan proceeds from ADB's OCR additional financing.

^bADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to item A.1.a.(i) Underground tunnels and stations subcomponent.

ADB = Asian Development Bank, AFD= Agence Francaise de Developpment, DGT=Direction Generale du Tresor, EIB=European Investment Bank , GoV= Government of Viet Nam

Source: Asian Development Bank and Government estimates.

Table C. 3 Detailed Cost Estimates by Financier, Revised Loan (in \$ million)

Item	ADB (OCR)		ADB (ADF)		ADB (CTF)		AFD		DGT		EIB		GoV				Total
	Amount ^a	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	Amount (Taxes and Duties)	Amount Total	%	
A. Base Costs																	
1. Metro Line 3 Construction																	
a. Civil Works																	
i. Underground Tunnel and Stations ^a	280.8	81.9%	0.0	0.0%	31.6	9.2%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	30.6	30.6	8.9%	343.0
ii. Elevated Sections, Depot, and Rail works ^b	0.0	0.0%	0.0	0.0%	0.0	0.0%	77.8	0.0%	0.0	0.0%	41.7	0.0%	0.0	14.1	14.1	0.0%	133.6
b. Equipment and Systems, Rolling Stocks	0.0	0.0%	0.0	0.0%	0.0	0.0%	75.9	17.6%	227.2	52.6%	86.9	20.1%	0.0	41.9	41.9	9.7%	431.9
c. Land Acquisition, Resettlement, and Utilities Relocation	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	26.9	0.0	26.9	100.0%	26.9
2. Implementation Support																	
a. Consulting Services																	
i. Consulting Services - PMS Phase 2	0.0	0.0%	4.7	94.8%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.3	0.3	5.2%	5.0
2. Consulting Services - Other Cofinancing	0.0	0.0%	0.0	0.0%	0.0	0.0%	11.4	13.4%	68.0	80.1%	0.0	0.0%	0.0	5.5	5.5	6.5%	84.8
b. Incremental administration	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	35.2	0.0	35.2	0.0%	35.2
Subtotal (A)	280.8		4.7		31.6		165.0		295.2		128.6		62.1	92.3	154.5	14.6%	1,060.4
B. Contingencies^d																	
1. Physical and Price	50.8	20.1%	0.8	0.3%	17.8	7.0%	32.0	12.6%	73.3	28.9%	28.7	11.3%	0.0	50.0	50.0	19.7%	253.4
Subtotal (B)	50.8	20.1%	0.8	0.3%	17.8	7.0%	32.0	12.6%	73.3	28.9%	28.7	11.3%	0.0	50.0	50.0	19.7%	253.4
C. Financing Charges During Implementation																	
1. Interest During Implementation including Commitment Charges	20.4	32.9%	0.3	0.4%	0.6	1.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	40.7	0.0	40.7	65.7%	62.0
Subtotal (C)	20.4	32.9%	0.3	0.4%	0.6	1.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	40.7	0.0	40.7	65.7%	62.0
Total Project Cost (A+B+C)	352.0		5.8		50.0		196.9		368.5		157.3		102.8	142.3	245.2		1,375.7
% of Total Project Cost	25.6%		0.4%		3.6%		14.3%		26.8%		11.4%				17.8%		100.0%

^a In relation to disbursement order, A.1.a.(i) of the original loan will be disbursed first prior to the disbursement of the loan proceeds from the additional financing. The Loan proceeds from ADB CTF will be front-loaded prior to the disbursement of the loan proceeds from ADB's OCR additional financing.

^b ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to item A.1.a.(i) Underground tunnels and stations subcomponent.

ADB = Asian Development Bank, AFD= Agence Francaise de Developpment, DGT=Direction Generale du Tresor, EIB=European Investment Bank , GoV= Government of Viet Nam

Source: Asian Development Bank and Government estimates.

D. Detailed Cost Estimates by Outputs

Table D.1 Detailed Cost Estimates by Outputs, Current Loan (in \$ million)

Item	Total Cost	Metro Line 3		Implementation Support	
		Amount	%	Amount	%
A. Base Costs					
1. Metro Line 3 Construction					
a. Civil Works					
i. Underground Tunnel and Stations	267.9	267.9	100.0%	0	0.0%
ii. Elevated Sections, Depot, and Rail works ^a	133.6	133.6	100.0%		0.0%
b. Equipment and Systems, Rolling Stocks	275.2	275.23	100.0%		0.0%
c. Land Acquisition, Resettlement, and Utilities Relocation	24.3	24.3	100.0%		0.0%
2. Implementation Support					
a. Consulting Services					
i. Consulting Services - Other Cofinancing	47.4	0	0.0%	47.4	100.0%
b. Incremental administration	35.2	0.0	0.0%	35.2	100.0%
Subtotal (A)	783.6	701.0	89.5%	82.6	10.5%
B. Contingencies^d					
1. Physical and Price	147.7	121.7	82.4%	26	17.6%
Subtotal (B)	147.7	121.7	82.4%	26	17.6%
C. Financing Charges During Implementation					
1. Interest During Implementation including Commitment Charges	59.2	48.5	81.9%	10.7	18.1%
Subtotal (C)	59.2	48.5	81.9%	10.7	
Total Project Cost (A+B+C)	990.5	871.2	88.0%	119.3	12.0%

^aADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

Source: Asian Development Bank and Government estimates.

Table D.2 Detailed Cost Estimates by Outputs, Additional Loan (in \$ million)

Item	Total Cost	Metro Line 3		Implementation Support		
		Amount	%	Amount	%	
A. Base Costs						
1. Metro Line 3 Construction						
a. Civil Works						
i. Underground Tunnel and Stations	75.1	75.1	100.0%	0.0	0.0%	
ii. Elevated Sections, Depot, and Rail works ^a	0.0	0.0	0.0%	0.0	0.0%	
b. Equipment and Systems, Rolling Stocks	156.7	156.7	100.0%	0.0	0.0%	
c. Land Acquisition, Resettlement, and Utilities Relocation	2.6	2.6	100.0%	0.0	0.0%	
2. Implementation Support						
a. Consulting Services						
i. Consulting Services - PMS Phase 2	5.0	0.0	0.0%	5.0	100.0%	
2. Consulting Services - Other Cofinancing	37.4	0.0	0.0%	37.4	100.0%	
b. Incremental administration	0.0	0.0	0.0%	0.0	0.0%	
Subtotal (A)	276.8	234.4	84.7%	42.4	15.3%	
B. Contingencies^d						
1. Physical and Price	105.7	98.3	93.1%	7.3	6.9%	
Subtotal (B)	105.7	98.3	93.1%	7.3	6.9%	
C. Financing Charges During Implementation						
1. Interest During Implementation including Commitment Charges	2.8	2.5	90.6%	0.3	9.4%	
Subtotal (C)	2.8	2.5	90.6%	0.3	9.4%	
Total Project Cost (A+B+C)	385.2	335.2	87.0%	50.0	13.0%	

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

Source: Asian Development Bank and Government estimates.

Table D.3 Detailed Cost Estimates by Outputs, Revised Loan (in \$ million)

Item	Total Cost	Metro Line 3		Implementation Support		
		Amount	%	Amount	%	
A. Base Costs						
1. Metro Line 3 Construction						
a. Civil Works						
i. Underground Tunnel and Stations	343.0	343.0	100.0%	0	0.0%	
ii. Elevated Sections, Depot, and Rail works ^a	133.6	133.58	100.0%	0	0.0%	
b. Equipment and Systems, Rolling Stocks	431.9	431.88	100.0%	0	0.0%	
c. Land Acquisition, Resettlement, and Utilities Relocation	26.9	26.93	100.0%	0	0.0%	
2. Implementation Support						
a. Consulting Services						
i. Consulting Services - PMS Phase 2	5.0	0	0.0%	5.0	100.0%	
2. Consulting Services - Other Cofinancing	84.8	0.0	0.0%	84.8	100.0%	
b. Incremental administration	35.2	0.0	0.0%	35.2	100.0%	
Subtotal (A)	1,060.4	935.4	88.2%	125.0	11.8%	
B. Contingencies^d						
1. Physical and Price	253.3	220.01	86.8%	33.33	13.2%	
Subtotal (B)	253.3	220.01	86.8%	33.33	13.2%	
C. Financing Charges During Implementation						
1. Interest During Implementation including Commitment Charges	62.0	51	82.3%	10.96	17.7%	
Subtotal (C)	62.0	51.0	82.3%	11.0	17.7%	
Total Project Cost (A+B+C)	1,375.7	1206.4	87.7%	169.3	12.3%	

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

Source: Asian Development Bank and Government estimates.

E. Detailed Cost Estimates by Year

Table E.1 Detailed Cost Estimates by Year, Current Loan - OCR (in \$ million)

Item	Total	Cumulative Disbursement (2012-2014) ^a	Undisbursed Amount	2015 ^b	2016	2017	2018	2019
A. Base Costs								
1. Metro Line 3 Construction								
a. Civil Works								
i. Underground Tunnel and Stations ^c	299.0	0.0	274.5	27.5	54.9	137.3	79.3	0.0
ii. Elevated Sections, Depot, and Rail works ^c	133.6	28.0	105.6	49.3	45.5	10.8	0.0	0.0
b. Equipment and Systems, Rolling Stocks	275.2	0.0	275.2	37.6	95.4	125.3	16.9	0.0
c. Land Acquisition, Resettlement, and Utilities Relocation	24.3	0.9	23.4	13.5	9.9	0.0	0.0	0.0
2. Implementation Support								
a. Consulting Services								
i. Consulting Services - Other Cofinancing	47.4	19.6	27.8	19.1	8.8	0.0	0.0	0.0
b. Incremental administration	35.2	3.3	31.9	5.6	26.3	0.0	0.0	0.0
Subtotal (A)	814.6	51.7	738.4	152.6	240.7	273.4	96.2	0.0
B. Contingencies^d								
1. Physical and Price	116.7	0.0	116.70	23.34	35.01	35.01	23.34	0.00
Subtotal (B)	116.7	0.0	116.7	23.3	35.0	35.0	23.3	0.0
C. Financing Charges During Implementation								
1. Interest During Implementation including Commitment Charges	59.2	1.2	58.0	0.5	2.8	6.5	7.6	40.6
Subtotal (C)	59.2	1.2	58.0	0.5	2.8	6.5	7.6	40.6
Total Project Cost (A+B+C)	990.5	52.9	913.1	176.4	278.5	314.9	127.1	40.6
% of Total Project Cost	100.0%	5.3%	92.2%	17.8%	28.1%	31.8%	12.8%	4.1%

^a actual disbursement as of Dec 2014

^b 2015 figures are only projections, no actual data yet.

^c ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

^d Change memo approved on _____ reallocated ADB contingency of \$31 million to civil works underground station allocation.

Source: Asian Development Bank and Government estimates.

Table E. 2 Detailed Cost Estimates by Year, Additional Loan - All Financiers (in \$ million)

Item		2016	2017	2018	2019
	Total				
A. Base Costs					
1. Metro Line 3 Construction					
a. Civil Works					
i. Underground Tunnel and Stations ^a	75.1	0.0	0.0	28.4	46.7
ii. Elevated Sections, Depot, and Rail works ^a	0.0	0.0	0.0	0.0	0.0
b. Equipment and Systems, Rolling Stocks	156.7	0.0	47.0	62.7	47.0
c. Land Acquisition, Resettlement, and Utilities Relocation	2.6	2.6	0.0	0.0	0.0
2. Implementation Support					
a. Consulting Services					
i. Consulting Services - Other Cofinancing	37.40	7.48	11.22	11.22	7.48
ii. Consulting Services - PMS Phase 2	5.00	0.5	1.4	2.4	0.8
b. Incremental administration	0.0	0.0	0.0	0.0	0.0
Subtotal (A)	276.8	10.6	59.6	104.7	102.0
B. Contingencies^b					
1. Physical and Price	105.7	0.0	0.0	67.2	38.4
Subtotal (B)	105.7	0.0	0.0	67.2	38.4
C. Financing Charges During Implementation					
1. Interest During Implementation including Commitment Charges	2.8	0.0	0.1	0.1	2.6
Subtotal (C)	2.8	0.0	0.1	0.1	2.6
Total Project Cost (A+B+C)	385.2	10.6	59.7	172.0	143.0
% of Total Project Cost	100.0%	2.7%	15.5%	44.6%	37.1%

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

Source: Asian Development Bank and Government estimates.

Table E.3 Detailed Financiers by Year, Revised Loan - All Financiers (in \$ million)

Item	Total	2012- 2014 ^a	2015 ^b	2016	2017	2018	2019
A. Base Costs							
1. Metro Line 3 Construction							
a. Civil Works							
i. Underground Tunnel and Stations ^c	374.1	0.0	27.5	54.9	137.3	107.7	46.7
ii. Elevated Sections, Depot, and Rail works ^a	133.6	28.0	49.3	45.5	10.8	0.0	0.0
b. Equipment and Systems, Rolling Stocks	431.9	0.0	0.0	0.0	129.6	172.8	129.6
c. Land Acquisition, Resettlement, and Utilities Relocation	26.9	0.9	13.5	12.5	0.0	0.0	0.0
2. Implementation Support							
a. Consulting Services							
i. Consulting Services - Other Cofinancing	84.8	19.6	19.1	16.2	11.2	11.2	7.5
ii. Consulting Services - PMS Phase 2	5.0	0.0	0.0	0.5	1.4	2.4	0.8
b. Incremental administration	35.2	3.3	5.6	26.3	0.0	0.0	0.0
Subtotal (A)	1,091.4	51.8	115.0	155.9	290.3	294.0	184.5
B. Contingencies^d							
1. Physical and Price	222.3	0.0	23.3	35.0	35.0	90.5	38.4
Subtotal (B)	222.3	0.0	23.3	35.0	35.0	90.5	38.4
C. Financing Charges During Implementation							
1. Interest During Implementation including Commitment Charges	61.9	1.2	0.4	2.8	6.6	7.7	43.2
Subtotal (C)	61.9	1.2	0.4	2.8	6.6	7.7	43.2
Total Project Cost (A+B+C)	1,375.7	53.0	138.8	193.7	331.8	392.3	266.1
% of Total Project Cost	100.0%	3.9%	10.1%	14.1%	24.1%	28.5%	19.3%

^a actual disbursement as of Dec 2014

^b 2015 figures are only projections, no actual data yet.

^c ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was

^d Change memo approved on _____ reallocated ADB contingency of \$31 million to civil works underground station allocation.

Source: Asian Development Bank and Government estimates.

Table E. 4 Detailed Cost Estimates by Year, Current Loan - OCR (in \$ million)

Item	Amount ^a	2014- 2015	2016					2017					2018					
			Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
A. Base Costs																		
1. Metro Line 3 Construction																		
A. Civil Works																		
i. Underground Tunnel and Stations	274.5	27.5	13.7	13.7	13.7	13.7	54.9	27.5	27.5	27.5	54.9	137.3	41.2	13.7	0.0	0.0	54.9	
B. Contingencies^b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
C. Financing Charges During Implementation																		
1. Interest During Implementation including Commitment Charges	18.5	1.7	0.0	0.9	0.9	0.9	2.8	0.9	1.9	1.9	1.9	6.5	3.7	2.8	0.9	0.2	7.6	
Total Project Cost	293.0	29.1					57.7					143.7					62.5	
% of Project Cost		9.9%					19.7%					49.1%					21.3%	

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

^b Allocation for Contingencies of \$31.0m was reallocated to civil works as per change memo dated _____.

Source: Asian Development Bank and Government estimates.

Table E. 5 Detailed Cost Estimates by Year, Additional Loan - OCR (in \$ million)

Item	Amount	2019				Total
		Q1	Q2	Q3	Q4	
A. Base Costs						
1. Metro Line 3 Construction						
a. Civil Works ^a						
i. Underground Tunnel and Stations	37.3	18.7	18.7	0.0	0.0	37.3
B. Contingencies						
Physical and Price	19.8	0.0	19.8	0.0	0.0	19.8
C. Financing Charges During Implementation						
1. Interest During Implementation including Commitment Charges	1.9	0.0	1.9	0.0	0.0	1.9
Total Project Cost	59.0					59.0
% of Project Cost						100.0%

^a For civil works, the current loan will be disbursed first prior to the disbursement of the loan proceeds from the additional financing. The Loan proceeds from ADB CTF will be front-loaded prior to the disbursement of the loan proceeds from ADB's OCR additional financing.

Source: Asian Development Bank and Government estimates.

Table E.6 Detailed Cost Estimates by Year, Additional Loan - ADF (in \$ million)

Item	Amount	2016			2017					2018					2019		
		Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Total
A. Base Costs																	
2. Implementation Support																	
i. Consulting Services - PMS Phase 2	4.70	0.24	0.24	0.47	0.24	0.24	0.47	0.47	1.41	0.47	0.47	0.71	0.71	2.35	0.24	0.24	0.47
B. Contingencies																	
1. Physical and Price	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.34	0.84
C. Financing Charges During Implementation																	
1. Interest During Implementation including Commitment Charges	0.26	0.00	0.03	0.03	0.00	0.00	0.00	0.08	0.08	0.00	0.00	0.00	0.08	0.08	0.00	0.08	0.08
Total Project Cost	5.80			0.50					1.49					2.43			1.39
% of Project Cost				8.6%					25.7%					41.9%			23.9%

Source: Asian Development Bank and Government estimates.

Table E.7 Detailed Cost Estimates by Year, Additional Loan - ADB CTF (in \$ million)

Item	Amount	2018					2019				
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
A. Base Costs											
1. Metro Line 3 Construction											
a. Civil Works ^a											
i. Underground Tunnel and Stations	31.6	0.0	0.0	9.5	19.0	28.4	3.2	0.0	0.0	0.0	3.2
B. Contingencies											
Physical and Price	17.8	0.0	0.0	0.0	0.0	0.0	8.9	8.9	0.0	0.0	17.8
C. Interest Charge and Management Fee											
	0.6	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.6
Total Project Cost	50.0					28.4					21.6
% of Project Cost						56.9%					43.1%

^a For civil works, the current loan will be disbursed first prior to the disbursement of the loan proceeds from the additional financing. The Loan proceeds from ADB CTF will be front-loaded prior to the disbursement of the loan proceeds from ADB's OCR additional financing.

Source: Asian Development Bank and Government estimates.

Table E.8 Detailed Cost Estimates by Year, Revised Loan - ADB including ADB-Administered Loan (in \$ million)

Item	Amount	2015					2016					2017				
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
A. Base Costs^c																
1. Metro Line 3 Construction																
Civil Works: Underground Tunnel and Stations	343.4	0.0	0.0	0.0	27.5	27.5	13.7	13.7	13.7	13.7	54.9	27.5	27.5	27.5	54.9	137.3
2. Implementation Support																
Consulting Services - PMS Phase 2	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.2	0.2	0.5	0.5	1.4
Subtotal (A)	348.1	0.0	0.0	0.0	27.5	27.5	13.7	13.7	14.0	14.0	55.4	27.7	27.7	27.9	55.4	138.7
B. Contingencies^b																
1. Physical and Price	38.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C. Financing Charges During Implementation																
1. Interest and Financing Charges	21.3	0.0	0.0	0.0	1.7	1.7	0.0	0.9	0.9	1.0	2.8	0.9	1.9	1.9	1.9	6.6
Total Project Cost	407.8															
Subtotal per Quarter		0.0	0.0	0.0	29.1	29.1	13.7	14.7	14.9	14.9	58.2	28.6	29.5	29.8	57.3	145.2
Cumulative Total			0.0	0.0	29.1		42.8	57.5	72.4	87.3		115.9	145.4	175.2	232.5	
% of Total Project Cost	100.0%					7.1%					14.3%					35.6%

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to Underground tunnels and stations subcomponent.

^b Allocation for Contingencies of \$31.0m was reallocated to civil works as per change memo dated _____.

Source: Asian Development Bank and Government estimates.

(continued to next page)

Table E.8 Detailed Cost Estimates by Year, Revised Loan - ADB including ADB-Administered Loan (in \$ million)

Item	2018					2019				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
A. Base Costs^c										
1. Metro Line 3 Construction										
Civil Works: Underground Tunnel and Stations	41.2	13.7	9.5	19.0	83.3	3.2	37.3	0.0	0.0	40.5
2. Implementation Support										
Consulting Services - PMS Phase 2	0.5	0.5	0.7	0.7	2.4	0.2	0.2	0.0	0.0	0.5
Subtotal (A)	41.6	14.2	10.2	19.7	85.7	3.4	37.5	0.0	0.0	40.9
B. Contingencies^d										
1. Physical and Price	0.0	0.0	0.0	0.0	0.0	9.4	29.0	0.0	0.0	38.4
C. Financing Charges During Implementation										
1. Interest and Financing Charges	3.7	2.8	0.9	0.3	7.7	0.3	2.0	0.3	0.0	2.6
Subtotal per Quarter	45.3	17.0	11.1	19.9	93.4	13.1	68.5	0.3	0.0	81.9
Cumulative Total	277.8	294.8	305.9	325.9		339.0	407.5	407.8	407.8	
% of Total Project Cost					22.9%					20.1%

^a ADB cofinanced rail works with AFD. However, the subcomponent was cancelled and the amount was reallocated to

^b Allocation for Contingencies of \$31.0m was reallocated to civil works as per change memo dated _____.

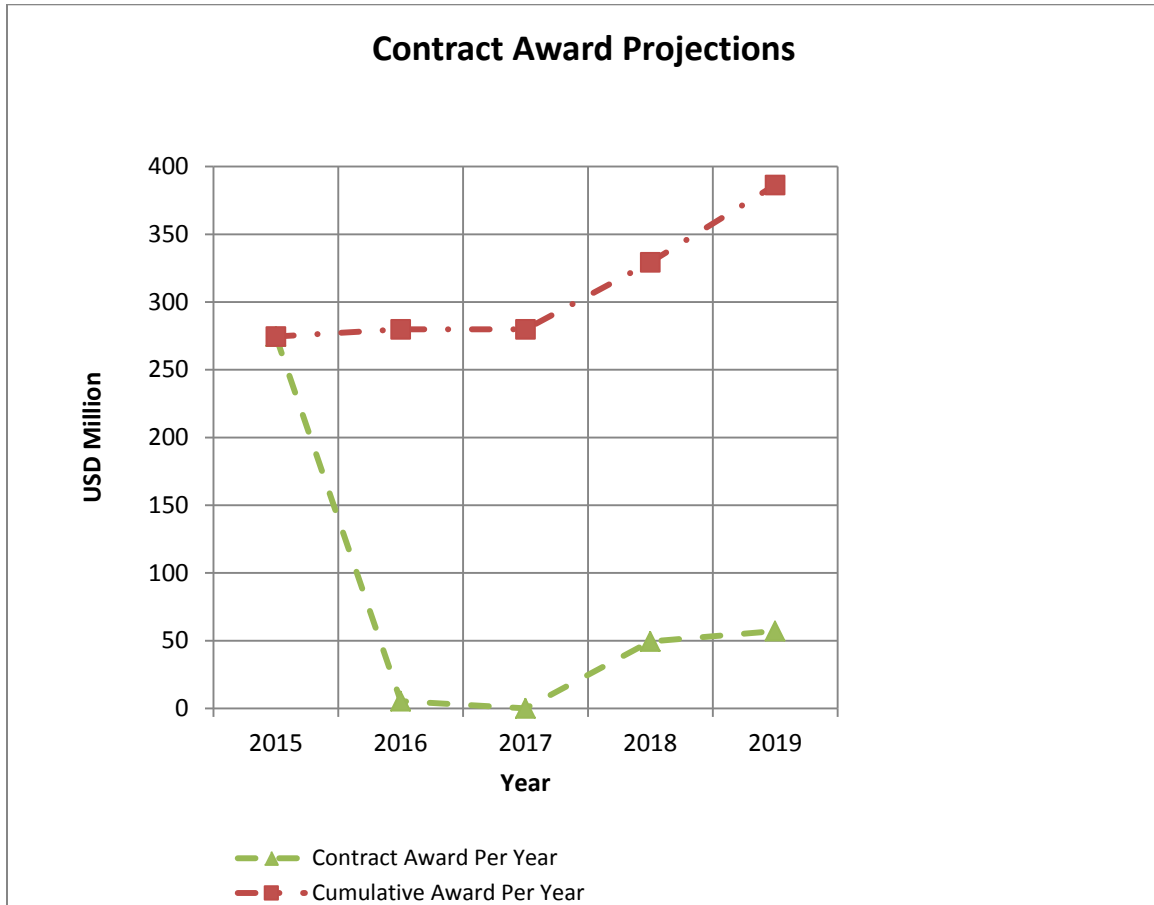
Source: Asian Development Bank and Government estimates.

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F. Contract and Disbursement S-curve for ADB Financing and ADB-administered Loan

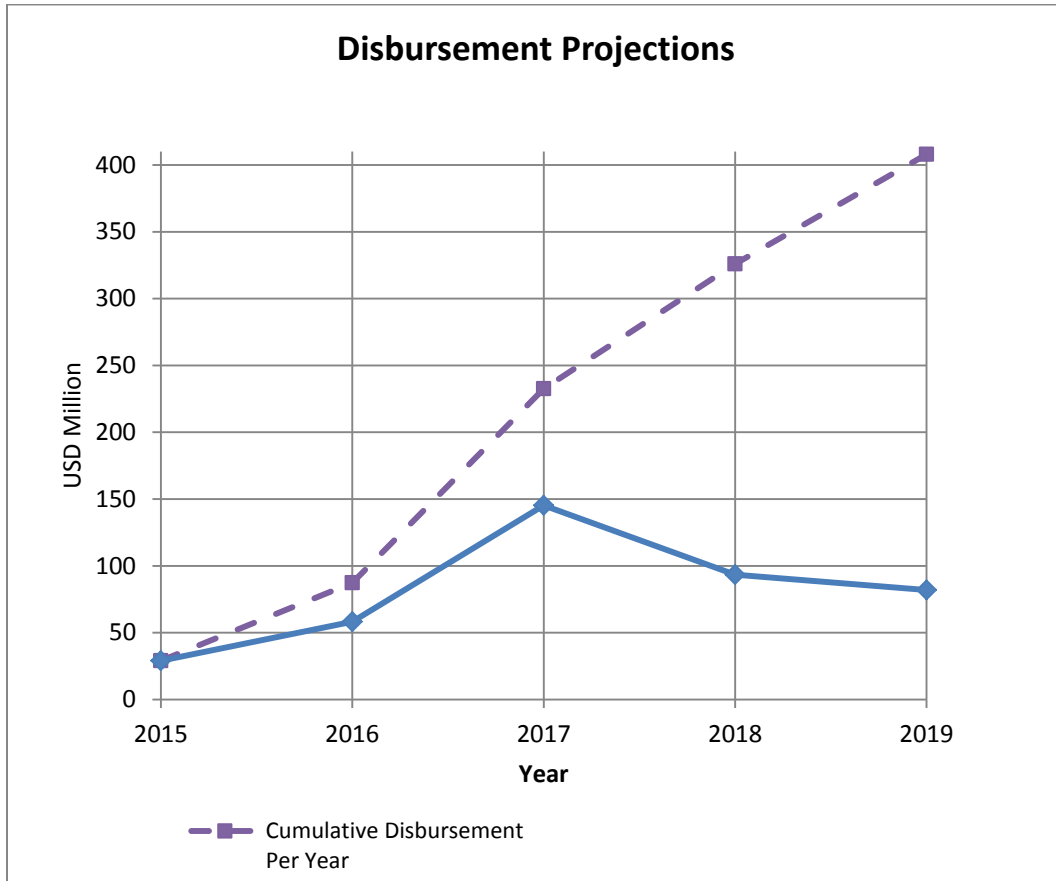
22. The contract award projection is in **Figure F.1**. **Figure F.2** reflects the estimated ADB disbursement progress over the implementation period for Project for ADB and ADB-administered loan. This will assist to assess the disbursement performance at any time during the project implementation. In case of delays and poor disbursements, this will help as an early warning system for taking timely remedial measures.

Figure F.1: Project Contract Awards S-Curve ¹⁴



¹⁴ While a breakdown by financiers is already available in the RRP and as Table C of the PAM, the detailed funds flow statement between all the donors to the Project, and which includes component and time wise contributions, will be completed as part of the Financial Management and Sustainability Action Plan, which is a loan covenant, and is to be submitted by MRB to ADB within 6 months from Loan effectiveness. This will also include update disbursement projections of all the cofinanciers' loans

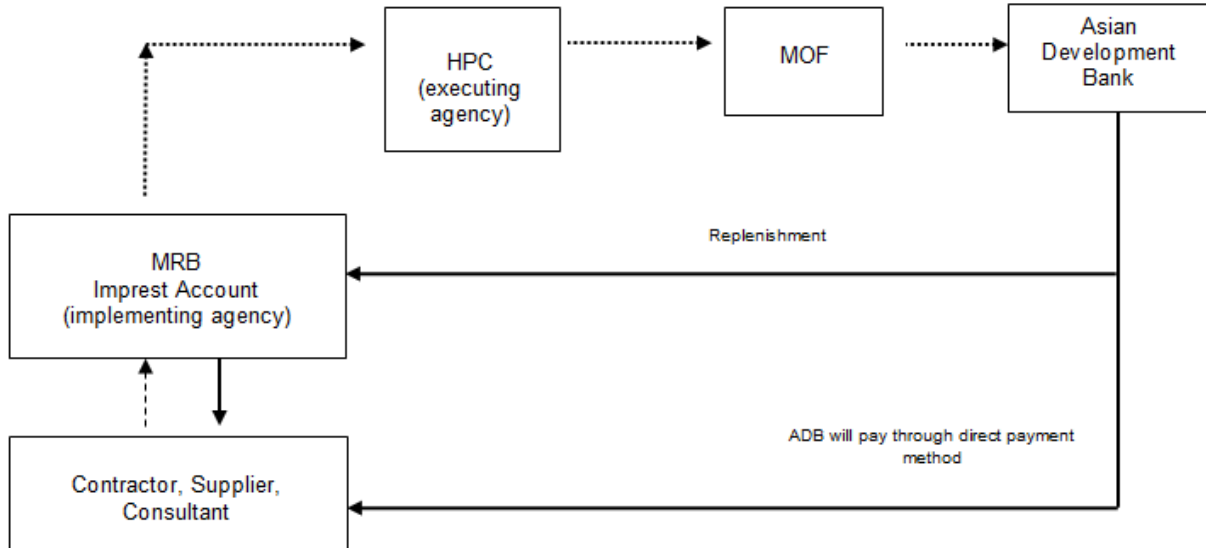
Figure F.2: Project Contract Awards S-Curve



Item	2015	2016	2017	2018	2019
CA/ Yr	274.5	5.40	0.00	49.4	57.1
Cum CA	274.5	279.90	279.90	329.30	386.40
	2015	2016	2017	2018	2019
Dis/ Yr	29.1	58.2	145.3	93.4	81.9
Cum Dis	29.1	87.3	232.6	326.0	407.9

G. Fund Flow Diagrams

23. The Fund flow diagram below show how the funds will flow from ADB and the Government to implement the Project.



Legend:

- > Claim
-> Withdrawal Applications
- > Payment

- HPC : Ha Noi People's Committee
- MRB : Ha Noi Metropolitan Railway Management Board
- MOF : Ministry of Finance
- WA : Withdrawal application

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

24. The risk categorization for the additional financing is “complex”, as the ADB overall financing is over \$200 million and project progress has been slow. The individual projects risks were assessed and the project received a “Medium” overall risk rating. The assessment considered the limited financial management capacity of HPC and MRB as well as uncertain financial sustainability of the Project as highest risk. In addition, risks due to inadequate policy and regulatory reform to achieve modal shift targets as well as project’s transparency to stakeholders were also high. These risks will be mitigated by introducing strong financial covenants into the loan agreements and developing a FMSAP to explore alternative models for revenue generation, as well as improving HPC’s and MRB’s capacity on regulatory issues and project implementation through training and engagement of the PMS consulting services. A short, medium and long term communication strategy is being prepared to ensure that project information is more widely disseminated and understood by the public and transparency improved. Implementation of the strategy will be supported by the PMS –phase 2 consultant.

25. The assessment also identified several other risks that have been lined out in the Risk Assessment and Risk Management Plan. Inefficient integration of Ha Noi public transport systems, shortage of HPC’s and MRB’s staff skills and capacity, limited capacity for monitoring of integrity and accountability, procurement collusion, as well as insufficient internal control and accounting were those ranked as medium risks. These risk will be mitigated by building better project ownership of the HPC and MRB staff, continuous training, regular monitoring and updating of project schedules, costs and action plans during monthly progress meetings, international competitive bidding strictly following ADB’s requirements, regular higher level coordination meetings between all financiers of the Ha Noi and HCMC Metro projects and agreeing actions for mitigation of common concerns with the highest government authorities. MRB’s unfamiliarity with ADB’s requirements on safeguards still poses a slight risk to the project. The mitigation will be ensured through regular monitoring, training and support. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.¹⁵

26. Both national and local government – project related – governance have continued to improve. Financial probity has increased and national legislation covering financial reporting and accounting standards have also improved. The assessment, however, considered the limited financial management capacity of HPC and MRB as well as doubtful financial sustainability of the Project as a concern. Strong financial covenants have been introduced into the loan agreements and developing a FMSAP to explore alternative models for revenue generation, as well as improving HPC’ and MRB’s capacity on regulatory issues and project implementation through training and engagement of the PMS consulting services. The project’s audited financial statements have not been submitted for the financial years of 2012, 2013, 2014 and 2015. Covenants have been included into the loan agreement as a condition for disbursement. No disbursements from the ADF Loan account for consulting services will be allowed until the Government submits to ADB the audited financial statements for the original project for the years 2012, 2013, and 2014.

¹⁵ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Summary of Major Risks and Mitigating Measures

Risks	Mitigating Measures
Lack of government policy support for modal shift from use of private vehicles to use of public transport.	The government, HPC, and MRB will (i) prepare future projections for use of public transport and approve implementing rules for the modal shift, and (ii) the cofinanciers will support the implementation of policy measures with adequate refinancing and improvement of HPC's and MRB's capacity through training.
Costs increase more than expected and the project is delayed.	International experts will be engaged to support project management. Cofinanciers will monitor contract costs regularly. HPC has committed to cover additional project costs.
Local government approvals of LAR activities are delayed.	Requirements on LAR-related documentation are clearly communicated to city and district authorities and correctness of documentation and timeliness of their approvals closely monitored by consultants, MRB, and the cofinanciers.
Sustainability of the project is undermined by a lack of financial subsidies by HPC and uncertainty over sufficient O&M capacity of the rail system operator after construction	The government will avail of loans for sustainable transport and infrastructure development. Strong financial covenants in the loan agreements for the additional financing require the preparation of an FMSAP to explore and develop alternative models for revenue generation to finance public transit and private sector engagement in O&M.
Lack of MRB's financial management capacity may pose an integrity risk and delay project implementation.	ADB will help MRB set up an integrated financial project management and accounting system and train MRB staff to operate the system.
Lack of a clear project communication plan may risk project transparency and public engagement.	The cofinanciers and MRB are preparing a communication strategy for the short, medium, and long terms that will ensure that project information is disseminated more widely and understood by the public and that transparency is improved.

FMSAP = financial management and sustainability action plan, HPC = Ha Noi People's Committee, LAR = land acquisition and resettlement, MRB = Ha Noi Metropolitan Railway Management Board.

Source: Asian Development Bank.

B. Disbursement

27. The ADB and CTF loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time),¹⁶ and detailed arrangements agreed upon between the Government and ADB. For civil works, the original loan will be disbursed first prior to the disbursement of the loan proceeds from the additional financing. The Loan proceeds from ADB CTF will be front-loaded prior to the disbursement of the loan proceeds from ADB's OCR additional financing. Online training for project staff on disbursement policies and procedures is available at: http://wpqr4.adb.org/disbursement_elearning. Project staff is encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

28. Loan proceeds will be generally disbursed directly to contractors, suppliers, and consultants, based on an approved contract using direct payment procedures, where ADB pays a designated beneficiary directly. A signed withdrawal application (Appendix 7A of Loan Disbursement Handbook) must be submitted to ADB together with a summary sheet (Appendix 7B of Loan Disbursement Handbook) and the required supporting documents. A separate withdrawal application is required for each different currency. The following supporting documents must be submitted to ADB together with withdrawal application: (i) contract or confirmed purchase order, if not submitted earlier to ADB, indicating the amount and the due date; (ii) for payment of services requires the consultant's claim or invoice; and (iii) for payment of civil works requires the claim or invoice from the contractor and a summary of work progress

¹⁶ Available at: http://www.adb.org/Documents/Handbooks/Loan_Disbursement/loan-disbursement-final.pdf.

certified by the project engineer and approved by the borrower's authorized representative. The required documents should be in English language.

29. Payments should be certified by the Engineer in the form of monthly interim payment certificate for the civil works contracts. The monthly certificates will then be split into the relevant funding portions for each contract (ADB and the Government) by the sub project manager. The sub-project manager will provide payment request form (SPP) and if this is in order and supported by approved order, Government will issue a Payment Order (SPM). The Government (or MRB/HPC) will submit a separate Withdrawal Application for each request for each currency.

30. Payment for individual consultants (national) may be made from the Imprest Account¹⁷. Under ADF financing, an imprest account will be established for the Project at a commercial bank. Currency of imprest account is in US\$. The imprest account will be managed by MRB. The financial Management assessment carried out by the ADB consultant found that Cash and Bank Safeguards over assets are managed properly. Bank accounts are established with appropriate signatories, bank documents are maintained as required and receipt of cash for deposit is recorded as per regulation. These are reconciled with the Treasury Department of the HPC monthly, with exceptional items referred to the MOF. However, since MRB to date has only managed financial accounts of other cofinanciers, and has no experience in ADB's financial procedures, the MRB's capacity to administer SOE procedures under the ADB loans is uncertain. ADB will provide relevant training to the MRB staff to further increase its financial capacity. The total outstanding advance to the imprest account should not exceed the estimate of ADB's ADF's share of expenditures to be paid through the imprest account for the forthcoming 6 months. The MRB may request for initial and additional advances to the imprest account based on an Estimate of Expenditure Sheet¹⁸ setting out the estimated expenditures to be financed through the account(s) for the forthcoming six (6) months. Supporting documents should be submitted to ADB or retained by the MRB in accordance with ADB's Loan Disbursement Handbook when liquidating or replenishing the imprest account. The imprest account is to be used exclusively for ADB's share of eligible expenditures. The MRB who established the imprest account in its name is accountable and responsible for proper use of advances to the imprest account.

31. The statement of expenditure (SOE) procedure will be used to reimburse/liquidate eligible expenditures per individual payment not exceeding \$50,000. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. MRB will be responsible for (i) preparing disbursement projections and (ii) requesting budgetary allocations for counterpart funds,

32. Before the submission of the first withdrawal application, SBV should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US\$500,000 equivalent. Individual payments below this amount should be paid by the EA/IA and subsequently claimed from ADB (i) through reimbursement; or (ii) from the imprest account, unless otherwise accepted by ADB.

33. There will be no withdrawals allowed to be made from the ADF Loan account for

¹⁷ Bank charges may be financed by the ADB and CTF financing.

¹⁸ ADB. 2012. *Loan Disbursement Handbook*. Appendix 10B.

consulting services until the Government submits to ADB the audited financial statements for the original project for the years 2012, 2013, and 2014.

C. Accounting

34. The MRB will maintain separate project accounts and records by funding source for all expenditures incurred on the Project. Project accounts will follow international accounting principles and practices.

D. Auditing

35. The HPC will cause the detailed consolidated project accounts to be audited in accordance with International Standards on Auditing and in accordance with the Government's audit regulations by an auditor acceptable to ADB. The audited accounts will be submitted in the English language to ADB within 6 months of the end of the fiscal year by the executing agency. The annual audit report will include a separate audit opinion on the use of the imprest fund and SOE procedures. The Government and HPC have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited accounts. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures. For revenue generating projects only, ADB requires audited financial statements (AFS) for each executing and/or implementation agency associated with the project. The project financial statements will be audited annually by an independent auditor. Public disclosure of the project financial statements, including the annual audit reports on the project financial statements, will be guided by ADB's Public Communications Policy (2011). Due to the non-submission of the audited financial statements and project accounts from fiscal year 2012 to 2014, a loan covenant was added prior to disbursement.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting

36. All works and consulting services to be fully financed out of the proceeds of the Loan shall be subject to and governed by ADB's *Procurement Guidelines*¹⁹ (April 2015, as amended from time to time), and ADB's *Guidelines on the Use of Consultants*²⁰ (March 2013, as amended from time to time). All works and consulting services to be fully financed out of the proceeds of AFD, DGT and EIB financing shall be subject to and governed by their respective procurement guidelines.

37. In order to avoid any gaps in the services of the PMS phase 1 and phase 2, advance actions is required to recruit and mobilize PMS-phase 2 consultant before ADB's additional financing becomes effective.

B. Procurement of Goods, Works and Consulting Services

38. International competitive bidding procedures will be used for civil works contracts estimated to cost \$10 million or more. Civil works will be procured through ICB using prequalification. ADB's prior review procedures will be followed. The HPC agreed to include the relevant sections of ADB's Anticorruption Policy (1998) in all bidding and contractual documents.

39. In cases where national competitive bidding (NCB) will be used, before the start of any procurement ADB and the Government will review the public procurement laws of the municipal and central government to ensure consistency with ADB's *Procurement Guidelines*.

40. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Section B.

C. Procurement Plan

41. The Loan involves 1 ICB package for civil works (Tunneling and Underground Stations, CW-CP03, ongoing procurement activity) and 1 package for consulting services (for engagement in 2015). Should there be any need for NCB procurement, before the start of any procurement ADB and MRB will review the Government's public procurement laws to ensure consistency with ADB's Procurement Guidelines. Any necessary modifications or clarifications to the Government's procedures will be reflected in the procurement plan. The procurement plan for the Project is detailed below in Table 6.1, and will be updated during the course of implementation.

42. Given the high degree of complexity of the project the MRB staff still requires substantial support on managing the project's daily activities. In addition the project will finance the first tunnel contract ever implemented in Ha Noi, which requires strong international technical and project management expertise. Therefore, continuous project management is required to ensure that the project will be implemented in compliance with the cofinanciers' requirements and with high international quality standards. The consulting services for PMS-phase 1 are financed by

¹⁹ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>

²⁰ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Consultants.pdf>

AFD, with original contract expiry date of 30 June 2014. ADB has tentatively agreed to finance PMS–phase 2 from its proposed additional financing. To ensure continuity of the PMS services, especially for implementation of the LAR activities, AFD agreed to extend the contract of the current PMS–phase 1 consultant until 30 September 2015, with an expectation that the ADB financed consultant²¹ could be mobilized soon after. The draft Terms of Reference (TOR) for the PMS–phase 2 consulting services is attached in Annex 1.

43. The procurement plan (Table 6.1) covers the first 18 months of procurement activity, which shall be finalized at the loan negotiations. Within one year after the date of loan effectiveness, the MRB shall submit a revised procurement plan to ADB for approval that captures all ongoing procurement and that planned for the following 18 months. The plan shall be updated annually (or as required after every loan review mission or after award of each major ICB contract), on the same basis for the duration of the project.

Table 6.1: Revised Procurement Plan

Project Name: Ha Noi Metro Rail System Project (Line 3: Nhon-Ha Noi Station Section) – Additional Financing	
Project Number: 40080-025	Approval Number: Loan xxxx
Country: VIET NAM	Executing Agency: Ha Noi People's Committee (HPC)
Project Procurement Classification: A	Implementing Agency: Ha Noi Metropolitan Railway Management Board (MRB)
Procurement Risk: High	
Project Financing Amount: \$ 114,800,000 ADB Financing, OCR : \$59,000,000 ADB Financing, ADF : \$5,800,000 Cofinancing (ADB Administered): \$50,000,000 Non-ADB Financing (Government): \$20,700,000	Project Closing Date: 31 December 2019
Date of First Procurement Plan: 20 August 2015	Date of this Procurement Plan: 22 October 2015

D. Methods, Thresholds, Review and 18-Month Procurement Plan

1. Procurement and Consulting Methods and Thresholds

1. Except as the Asian Development Bank (ADB) may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding (ICB) for Works	\$10,000,000	

Consulting Services	
Method	Comments
Quality and Cost Based Selection (QCBS) Individual Consultants	

²¹ The consultant for the PMS–phase 2 will be recruited using QCBS, 80:20 quality-cost ratio and full technical proposal. Terms of Reference for the consulting services will be included in the PAM.

2. Goods and Works Contracts Estimated to Cost \$1 Million or More

2. There are no goods and works contracts estimated to cost \$1 million or more for which the procurement activity is either ongoing or expected to commence within the next 18 months.

3. Consulting Services Contracts Estimated to Cost \$100,000 or More

3. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

Package Number	General Description	Estimated Value	Recruitment Method	Review (Prior / Post)	Advertisement Date (quarter/year)	Type of Proposal	Comments
CS1	Project Management Support Consulting Services (Phase 2)	\$4.7 million	QCBS	Prior	Q4/2015	Full Technical Proposal (FTP)	International, 80:20 Excluding taxes and duties and contingencies

4. Goods and Works Contracts Estimated to Cost Less than \$1 Million and Consulting Services Contracts Less than \$100,000 (Smaller Value Contracts)

4. There are no smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

E. Indicative List of Packages Required Under the Project

5. There are no indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections that will be procured or engaged beyond the current period.

F. List of Awarded and On-going Contracts

6. The following tables list the awarded and on-going contracts, and completed contracts.

Goods and Works							
Package Number	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
CW-CP03	Construction of Tunnel and Underground Stations	\$281.6 million (Equivalent to 253.67 million Euros, excluding VAT and	\$260.3 million	ICB	Q4/2012	19 October 2015	- Awarded Contract Value excl. VAT, and contingency. - Exchange rates: 1= 1.1USD, 1USD=

Goods and Works							
Package Number	General Description	Estimated Value	Awarded Contract Value	Procurement Method	Advertisement Date (quarter/year)	Date of ADB Approval of Contract Award	Comments
		contingencies) ²²					22,103VND Sources: https://forex.adb.org , as of Aug 2015 - MRB issued Letter of Acceptance to successful bidder on 22 October 2015.

G. Completed Contracts

7. There are no completed contracts of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections that will be procured or engaged beyond the current period.

H. Non-ADB Financing

8. AFD, DGT, and EIB will finance nine civil works and equipment contracts and five consulting services contracts under parallel collaborative cofinancing arrangement with ADB. ADB, AFD, DGT and EIB will administer their respective contracts in accordance with their own policies and procedures. ADB, AFD, DGT, and EIB will promptly inform each other of any event which interferes or threatens to interfere with the processing and implementation of their respective loans. ADB, AFD, DGT, and EIB will each retain independent right of action and decision under their respective legal agreement with the Government of Vietnam.
9. ADB, AFD, DGT, and EIB will inform each other in advance of any proposed mission by its representatives, in order to explore joint participation in such missions. In case joint missions are not possible, cofinanciers will inform the progress of their respective project components, including copies from the review missions. The cofinanciers agree that a single process for social and environmental assessment and planning, safeguard documentation, consultation, and disclosure requirements shall be conducted to satisfy both the ADB's Safeguards Policy Statement 2009 (SPS) and the requirements of the cofinanciers. During project preparation and implementation, ADB shall be responsible for conducting due diligence, reviewing documents and monitoring project activities in accordance with the SPS. ADB will share with the cofinanciers all documents related to this process (due diligence, monitoring according to SPS). AFD, DGT and EIB will be responsible for conducting due diligence, monitoring and reviewing documents and supervising other activities that are not required by ADB's SPS but may be required by the

²² Source: HPC approval of Decision No. 75/QD.UBND, dated 6 January 2014

other cofinanciers.

10. The AFD's, DGT's, and EIB's financing of the project's investment plan and collaboration with ADB, will be subject to the satisfactory conclusion of all internal approval processes of the AFD, DGT, and EIB.
11. Utilities removal works will be financed from HPC counterpart funding and administered by MRB. These contracts will be implemented in accordance with the implementation schedule of the main civil works packages agreed to by MRB and the co-financiers.

I. National Competitive Bidding

1. General

12. The procedures to be followed for the procurement of goods, non-consulting services, and works under contracts awarded on the basis of National Competitive Bidding shall be those set forth in: (a) Law on Procurement No. 43/2013/QH13 dated November 26, 2013 ("Law on Procurement") and (b) Decree No. 63/2014/ND-CP dated June 26, 2014 (collectively, "National Procurement Laws"). Whenever any procedure in the National Procurement Laws is inconsistent with the ADB Procurement Guidelines (March 2013, as amended from time to time), the ADB Procurement Guidelines shall prevail, amongst others on the following.

2. Eligibility

(i) The eligibility of bidders shall be as defined under section I of the ADB Procurement Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in section I of the ADB Procurement Guidelines, as amended from time to time. Conditions of bidders' participation shall be limited to those that are essential to ensure bidders' capability to fulfill the contract in question. Foreign bidders shall be eligible to participate under the same conditions as national bidders. Foreign bidders shall not be asked or required to form joint ventures with, or be subcontractors to, national bidders in order to submit a bid.

(ii) A firm declared ineligible by ADB cannot participate in bidding for an ADB-financed contract during the period of time determined by ADB.

(iii) A bidder shall not have a conflict of interest, which term shall be defined in accordance with section 1 of ADB Procurement Guidelines.²³ Any bidder found to have a conflict of interest shall be ineligible for contract award.

(iv) Government-owned enterprises in the Borrower's country shall be eligible to participate as a bidder only if they can establish that they are legally and financially autonomous, operate under commercial law and are not dependent agencies of the Borrower or Sub-Borrower.

(v) National sanction lists may only be applied with approval of ADB²⁴.

²³ Detailed guidance on how to apply conflict of interest test is available under section 1 of ADB's standard bidding documents for goods and works (as amended from time to time).

²⁴ For fraud and corruption cases, Section 50 of ADB's Integrity Principles and Guidelines provides that ADB may decide that another international financial institution's or legal or regulatory body's determination that a party has failed to adhere to appropriate ethical standards, as defined by any established system of principles, rules, or duties, including the laws or regulations of a state, constitutes that party's failure to maintain the highest ethical standards as required by ADB's Anticorruption Policy. The party may be subject to remedial action in accordance with the Integrity Principles and Guidelines. <http://www.adb.org/sites/default/files/integrity-principles-guidelines.pdf>

3. Preferences

13. No preference of any kind shall be given to domestic bidders over foreign bidders or for domestically manufactured goods over foreign manufactured goods. Unless otherwise stated in the applicable financing agreement, preferences among domestic bidders set forth in Article 14(3) of the Law on Procurement shall not be applied.

4. Bidding Procedure

14. Single stage-single envelope shall be the default bidding procedure and application of other bidding procedures shall require ADB's prior approval.

5. Time for Bid Preparation

15. The time allowed for the preparation and submission of bids for large and/or complex packages shall not be less than thirty (30) days from the date of the invitation to bid or the date of availability of the bidding documents, whichever is later.

6. Standard bidding documents

16. The Borrower's standard bidding documents, acceptable to ADB, shall be used. Bidders shall be allowed to submit bids by hand or by mail/ courier.

7. Bid Opening and Evaluation

(i) Bids shall be opened in public, immediately after the deadline for submission of bids, regardless of the number of bids received.

(ii) Except with the prior approval of ADB, merit points shall not be used in bid evaluation.

(iii) No price adjustments shall be made for evaluation purposes in accordance with Article 117(6) of Decree 63 when unit rates offered by the bidder are determined to be abnormally low.

(iv) Bidders shall be given commercially reasonable time period to respond to clarification requests.

(v) Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations²⁵.

(vi) Except with the prior approval of ADB, negotiations contemplated under paragraphs 7 and 8 of Article 117 of Decree No. 63/2014/ND-CP shall not take place with any bidder prior to contract award.

(vii) A bidder shall not be required, as a condition for award of contract, to undertake obligations not specified in the bidding documents or otherwise to modify the bid as originally submitted.

8. Rejection of All Bids and Rebidding

(i) No bid shall be rejected on the basis of a comparison with the Procuring Entity's estimate or budget ceiling without ADB's prior concurrence.

²⁵ A minor, non-substantial deviation is one that, if accepted, would not affect in any substantial way the scope, quality, or performance specified in the contract; or limit in any substantial way, the Contracting entity rights or the Bidder's obligations under the proposed contract or if rectified, would not unfairly affect the competitive position of other bidders presenting substantially responsive bids.

- (ii) All bids shall not be rejected and new bids solicited without ADB's prior approval.

9. Publication of the Award of Contract. Debriefing.

(i) For contracts subject to prior review, within 2 weeks of receiving ADB's "No-objection" to the recommendation of contract award, the borrower shall publish in the Government Public Procurement Gazette, or well-known and freely-accessible website the results of the bid evaluation, identifying the bid and lot numbers, and providing information on: i) name of each bidder who submitted a bid; ii) bid prices as read out at bid opening; iii) name and evaluated prices of each bid that was evaluated; iv) name of bidders whose bids were rejected and the reasons for their rejection; and v) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

(ii) For contracts subject to post review, the procuring entity shall publish the bid evaluation results no later than the date of contract award.

(iii) In the publication of the bid evaluation results, the Borrower shall specify that any bidder who wishes to ascertain the grounds on which its bid was not selected, may request an explanation from the Borrower. The Borrower shall promptly provide an explanation of why such bid was not selected, either in writing and/or in a debriefing meeting, at the option of the Borrower. The requesting bidder shall bear all the costs of attending such a debriefing.

10. Contract Administration

- 17. The Contract Agreement, as such term is defined in the relevant bidding document, shall be applied without any modification during implementation except as otherwise agreed by ADB.

11. Fraud and Corruption

- 18. A provision shall be included in all bidding documents for NCB works and goods contracts financed by ADB stating that ADB will sanction a party or its related parties, including declaring ineligible, either indefinitely or for a stated period of time, to participate in ADB-financed, administered or supported activities if it at any time determines that the party has, directly or indirectly through an agent, engaged in integrity violations as defined under ADB's Integrity Principles and Guidelines, including corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, an ADB-financed, administered or supported contract.

12. Right to Inspect/ Audit

- 19. Each bidding document and contract financed by ADB shall include a provision requiring bidders, contractors, agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit ADB to inspect all accounts, records and other documents relating to any prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by ADB.

VII. SAFEGUARDS

44. The primary objective of safeguards is to avoid adverse impacts of projects on the environment and people. If impacts become unavoidable to realize the intended positive project impacts, adverse impacts shall be minimized, mitigated or affected people compensated. Approved and acceptable planning procedures shall be used and will be part of project covenants. Such procedures and documents shall be acceptable and approved by approving authorities in Viet Nam and by ADB. They will be disclosed in accordance with the agreed procedures by ADB and the borrower. The original project is classified as safeguard category A for involuntary resettlement and environment, and C for indigenous peoples. Since the additional financing will only cover cost increases and consulting services, no additional environment or LAR impacts are envisaged. Based on para 35 of OM Section F1/OP, the safeguards categorization for the additional loans will be C for environment, involuntary resettlement and indigenous peoples. The mitigation measures under the current EIA and resettlement plans will continue to be ensured.

A. Involuntary Resettlement

45. A draft RP for the whole Metro Line 3 was agreed between ADB and the Government in 2011. In February 2014, ADB approved an updated RP for the depot and access line following further consultations and detailed measurement surveys. Compensation payments were conducted from December 2014 to January 2015. A due diligence review of the resettlement activities is ongoing. Initial information provided by the North Tu Liem District and interview with some affected households suggests that compensation and assistance provided to affected households, consultation and grievance redress generally followed the provisions in the RP. The enforcement of land recovery decision also followed the procedures as provided by existing regulations. Remaining activities involve the implementation of the livelihood restoration activities, and review of support for some cases. Completion of the due diligence review is a condition for awarding the site to the contractor. An updated RP is being prepared to cover impacts from the underground section following an updated/improved set of entitlements for the affected households, consultations and surveys. Approval of the updated RP by ADB is a condition for the award of contracts, while the completion of compensation and provision of assistance to affected households is a condition for commencing civil works. An addendum to the RP will be needed once the impacts at the tunnel section between Stations 9 and 10 have been verified by the civil works contractor. Internal and external monitoring of resettlement activities for the entire alignment is being conducted. Issues and updates on resettlement are also discussed in the monthly joint-donors meetings. The project has no impacts related to indigenous peoples' issues. The Summary Poverty Reduction and Social Development Strategy (SPRSS) is attached.

46. HPC shall timely provide counterpart funds for land acquisition, resettlement and monitoring activities specified in the agreed RP, and will meet any unforeseen obligations in excess of the RP budget estimate in order to satisfy resettlement objectives.

B. Environment

47. The environmental categorization of the proposed additional financing is Category C since it will not involve additional civil works. ADB conducted due diligence of on-going site works in March 2015 to assess compliance with the project environmental management plan (EMP). The due diligence suggested that the construction sites are generally tidy and

organized. Sturdy metal sheet fence/walls with light posts were installed around all construction sites. Security personnel are assigned at the construction site ingress/egress and the public are not allowed access to the area. The use of personnel protective equipment is satisfactory. Toilets/ portalets and garbage bins are provided at the construction areas. There are proper provisions for hazardous materials such as fuel and oil. Disposal sites have been allocated and approved by the relevant authorities. The due diligence also noted that commercial facilities utilized by the contractors were covered by an environmental impact assessment (EIA) which has been approved by DONRE and HPC on May 2010 and June 2010, respectively. Despite some noise generated by project vehicles/trucks during occasional nights, no major environmental issues were observed during the due diligence.

C. Poverty/Social/Gender

48. Connecting public transportation will provide improved access, which will benefit all people in the area, but especially those whose mobility is restricted. The impact is expected to especially benefit workers from the rural and suburban areas, women, elderly people and students who are more inclined to use public transportation. The rapid public transportation system will save passengers' travel time compared to travel by motorbike, car, or bus. An improved public transportation system is accordingly expected to contribute to investments, services, and labor opportunities, leading to increasing wealth and rising living standards among residents, entrepreneurs and the workforce in the project districts. The project will include the ticketing system design and installation with a fare calculation in a such a way that affordability of the disadvantaged groups of users such as the poor, senior citizen, students and so on will be taken in to consideration.

49. The additional financing project gender category is proposed Effective Gender Mainstreaming (EGM). The Gender Action Plan (GAP) remains the same as that of the original loan and includes: (i) employment targets for women and gender-specific core labor standards as part of all civil works and other transport services employment generation, (ii) consideration of gender-inclusive physical design features (to ensure accessible, safe, secure, comfortable and affordable metro system for women), and (iii) mitigation of gender-related impacts of resettlement/civil work's social risks (such as the risk of HIV/AIDS and STIs transmission, human trafficking during civil work and violation of the labor standards).. To implement the GAP, MRB will appoint a full time gender /social specialist to take charge of the GAP implementation under MRB management. The specialist will (i) coordinate with relevant stakeholders for ensuring GAP related activities are implemented timely; (ii) monitor GAP and DMF gender related targets are achieved; (iii) liaise and work with PMS consultants on gender /HIV/AIDS and communication specialists to make use of their support effectively and timely; (iv) update GAP monitoring table bi-annually as part of the progress report to ADB; and (v) prepare GAP Project Completion Report. The TOR for the PMS – phase 2 consultant will include an international and a national gender consultant (to provide technical support to MRB on gender specific issues. The GAP and TOR will be included in the PAM. Assurances on implementation of Gender Action Plan, Health risks reduction (HIV/AIDS, STIs transmission), and the labor standard compliances will be included in the loan covenants.

D. Execution of Civil Works Contracts

50. HPC, through MRB, will ensure that, subsequent to award of civil works contract, no section or part of the section for any project will be handed over to the contractor until the applicable provisions of the EIA and RPs, particularly the timely delivery of compensation to affected families, have been complied with.

51. Any changes to the location, alignment of works, or environmental impacts arising from the detailed designs of any project will be subject to prior approval by ADB and the relevant government agency of Viet Nam.

VIII. GENDER AND SOCIAL DIMENSIONS

Output and Gender-related Objective(s)	Activity/Strategy	Performance/Target Indicators ²⁶
<p>Preparatory Stage</p> <p>To ensure due consideration of gender issues and analysis in program planning, design and implementation procedures.</p>	<p>Appoint a full-time Gender Specialist in Ha Noi Metropolitan Rail Transport Project Board (HRB) responsible for supervision and reporting against the GAP throughout the Project period.</p>	<p>- A full-time Gender Specialist is appointed within Metropolitan Railway Management Board (MRB) and reporting periodically on progress with GAP implementation.</p>
	<p>Gather baseline sex-disaggregated data and gender analytical information for preparatory surveys, feasibility studies and assessments.</p>	<p>- Studies (such as the one on resettlement impacts, affordability study, etc) and reports include reference to gender- disaggregated data and gender analytical information.</p>
	<p>Facilitate equal participation and consultation of women affected by and involved in the Project during preparatory surveys, studies, assessments and other consultative mechanisms.</p>	<p>- Female beneficiaries and affected people are equally consulted and participate in meetings on surveys, studies, assessments and other consultative mechanisms. Sex-disaggregated data are reported on the process.</p>
<p>Output 1: Metro Line 3 is operational</p>		
<p>To ensure that gender aspects are integrated into Metro infrastructure design and construction to maximize women's equal access and benefits.</p>	<p>Civil works for stations and depot designed and constructed considering gender aspects and including features that are important from gender perspective, such as:</p> <ul style="list-style-type: none"> - Safe lighting, separate male: female toilets and waiting areas, child-friendly access and facilities, video surveillance 	<p>Gender-specific physical design features evident in newly constructed Metro infrastructure facilities.</p> <ul style="list-style-type: none"> - Safe lighting, separate male: female toilets and waiting areas, child-friendly access and facilities, video surveillance - Space for market stalls and women-run small businesses in stations and depot (removed in AF GAP)²⁷

²⁶ Gender targets proposed here remain basically the same as of the original phase but are rearranged to aligned better with the DMF outputs.

²⁷ The target "Space for market stalls and women-run businesses in stations and depot" is removed as other loan L3235 has GAP target to cover this. In addition, the current phase's civil work detailed designs did not include these, a revision to the detailed designs to include this will cause further significant changes to project.

Output and Gender-related Objective(s)	Activity/Strategy	Performance/Target Indicators²⁶
	<ul style="list-style-type: none"> – Station design allows space for market stalls and women-run small businesses 	
To mitigate potential negative impacts from new Metro construction.	Establish targets for female employment generation in any project civil works	<ul style="list-style-type: none"> – Minimum 30% of jobs generated by Metro civil works occupied by women.
	Regulate adherence to gender-specific core labor codes and a code of conduct in construction company contracts for all civil works.	<ul style="list-style-type: none"> – All construction contracts for Metro civil works include gender-specific core labour codes, and a code of conduct.
	Include information on potential negative impacts through raising awareness and information to all construction labor force.	<ul style="list-style-type: none"> – HIV/AIDS and Trafficking Prevention Program implemented encompassing all Project employees.
	Ensure that women’s needs are equally met through Resettlement Plan, e.g. quotas for women’s participation in resettlement committees, specific attention to impacts on (predominantly female) shopkeepers in Nui Truc Street, ensuring that women and men equally receive compensation payments.	<p>Each resettlement committee has at least a female representative (revised from “ 50% of representatives in resettlement committees are women” – original GAP target)²⁸</p> <ul style="list-style-type: none"> – 100% of affected female shopkeepers have received income restoration and livelihood support. – 100% compensation receipts with female and/or both husband and wife signatures
Output 2: MRT 3 Electrical and Mechanical Systems (E&M), and rolling stock To promote women's role in transport sector operations and	Establish targets for female employment generation in Metro E&M systems and rolling stock equipment, in station and	Minimum 30% of jobs generated by Metro E&M systems and rolling stock equipment in station and depot management, ticketing, station attendance and security, and train driving are occupied by women.

²⁸ The revision came based on the government policy on resettlement committee which only stipulates to have one Women Union representative in each committee, other members coming from land administration division of the district who are male dominant. Therefore the original target is unrealistic and unlikely achieved at the end.

Output and Gender-related Objective(s)	Activity/Strategy	Performance/Target Indicators²⁶
<p>service delivery.</p> <p>To ensure that E&M systems and rolling stock equipment are designed to ensure women's equal access to the Metro service</p>	<p>depot management, ticketing, station attendance and security, and train driving.</p> <p>E&M systems and rolling stock equipment designed with gender-specific features:</p> <p>Separate carriages for women and children, priority seating for pregnant women, space for baby prams and wheelchairs, emergency intercom and video surveillance.</p>	<p>Gender-specific physical design features evident in new E&M systems and rolling stock equipment:</p> <p>Separate carriages for women and children, priority seating for pregnant women, space for baby prams and wheelchairs, emergency intercom and video surveillance.</p>
<p>Output 3: Improved implementation capacity of MRB To support HRB and transport sector staff to mainstream gender into Metro Rail project delivery and operations</p> <p>To promote the role of women in MRB transport sector and ensure the participation of female HRB/transport sector staff in capacity development</p>	<ul style="list-style-type: none"> - Appoint a full-time Gender Specialist in HRB responsible for supervision and reporting against the GAP throughout the Project period. - Provide gender awareness and GAP implementation training for HRB staff. - All female HRB Project staff members participate in relevant capacity development activities. - Integrate gender-related substantive content into HRB capacity development activities and communication strategies wherever appropriate - Proactively encourage and promote women's employment in 	<ul style="list-style-type: none"> - A full-time Gender Specialist is appointed within MRB to secure proper attention to Gender Action Plan implementation. - Gender awareness and GAP implementation training materials developed, and training delivered with sex-disaggregated attendance records. - Number of female MRB Project staff participants per capacity development activity. - Gender-related substantive content reflected in all MRB training materials where appropriate. - Content of recruitment materials for Metro employment enhancing female applicants - Minimum 20 % of new appointed/hired MRB staff are female. - Gender technical support is reflected in consultancy reports and other deliverables from consulting

Output and Gender-related Objective(s)	Activity/Strategy	Performance/Target Indicators ²⁶
	the transport services sector. - Include responsibility for gender issues and gender analysis in Terms of Reference for all consultants, wherever relevant.	services.

52. **Implementation arrangement:** MRB will appoint a gender specialist within its organization to be tasked to drive the implementation, monitoring and reporting on GAP progress and achievements. MRB full-time gender specialist will work with PMS – phase 2 consultant’s gender specialists (4 man-month, intermittent inputs international and 12 man-month national intermittent gender/social specialists) to ensure GAP implementation with consultant’s technical support. The MRB gender specialist’s ToR includes for (i) Preparing her/his own yearly and monthly workplan for GAP implementation. (ii) coordinating with related stakeholders (contractors, supervisors, procurements specialists, M&RE specialist , etc.) in MR for ensuring GAP related activities ; (iii) Monitor GAP and DMF gender related targets ; (v) liaison and work with PMS consultants on gender /HIV/AIDs and communication specialists to make use of their support effectively and timely. (iv) update GAP monitoring table bi-annually as part of the progress report to ADB. And (vi) preparing the government GAP PCR. The PMS-phase 2’s consultant gender specialists’ ToRs are in the PAM and/or PMS-phase 2 Consultant ToRs.

SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

Country:	Viet Nam	Project Title:	Ha Noi Metro Rail System Project (Line 3: Nhon – Ha Noi Station Section)
Lending/Financing Modality:	Project—Additional Financing	Department/ Division:	Southeast Asia Department/ Transport and Communications Division

I. POVERTY AND SOCIAL ANALYSIS AND STRATEGY

Poverty targeting: general intervention

A. Links to the National Poverty Reduction and Inclusive Growth Strategy and Country Partnership Strategy

The Government of Viet Nam is aware that inadequate infrastructure slows both economic growth and poverty reduction. The government's transport strategy for the capital city of Ha Noi is to develop public transport and infrastructure to alleviate congestion and provide residents better access to services and employment opportunities. An urban public transport system will (i) help address growing traffic congestion and pressure on the environment in high-density areas; (ii) improve the quality of life, the working environment, access to services, and the ability to attract investment in the project areas; and (iii) therefore help to reduce poverty in Ha Noi. This is in line with a government policy to speed up the development of urban rail passenger metro lines during 2015-2020.²⁹ ADB's country partnership strategy for Viet Nam for 2012–2015 aimed to support this government policy through urban transport projects to ease urban transport congestion and reduce greenhouse gas emissions³⁰.

B. Results from the Poverty and Social Analysis during PPTA or Due Diligence

1. Key poverty and social issues. The project is located in four urban districts of Ha Noi (Ba Dinh, Cau Giay, Dong Da, and Hoàn Kiếm) and two suburban district (Bac Tu Liem and Nam Tu Liem). It is expected to contribute to poverty reduction and socioeconomic development by providing a clean, safe, comfortable, fast, and affordable urban transport system accessible to all people living, working, and traveling in the project districts. Line 3 of the metro system, which is to be developed under the project, will provide a cheaper alternative to travelling by motorbike or car. The metro system will reduce air pollution by shifting passengers from the use of motorcycles and cars to public transit and thereby help make the city's people and environment healthier. The safe public transit system that the project will help develop will also reduce the number of road traffic accidents. According to a survey of households³¹ 92% of men and 81% of women used motorbikes for travel to and from the center of Ha Noi, while 60% of students and children used public transport (buses) and 33% used bicycles. About 50% of the households' surveyed considered lost time due to traffic jams to be the worst problem they experienced when traveling, while 34% named air pollution and 16% the risk of accidents. Almost all households (95%) were willing to pay the same fare they are now charged for bus travel to use an expanded metro system.

At 1.52% in 2012, the poverty rate in Ha Noi was much lower than the national rate of 9.6%.³² However, some groups are vulnerable in both economic and social terms. This is especially true of migrant workers, households that have moved from other provinces, and workers in the informal sector. The urban project districts have poverty rates of under 1.0%, but the rate in the project's one suburban district was 3.3% in 2007.

2. Beneficiaries. The project will benefit all of the residents of communities along line 3 in the project districts, which have a total population of 1,481,700 people (about half of whom are women and girls). Those who live further from the metro line but who can connect to it by bus, motorbike, or bicycle can also benefit. By helping improve the modal connections on the public transport system to make access and transfers easier and more convenient, the project will benefit all people in the area, especially those whose mobility is restricted. The beneficial impact is expected to be felt most by workers commuting from rural and suburban areas, women, elderly people, and students—all of which are likely to shift from their current transport mode to using public transport once the metro system in Ha Noi is operational. The metro system will move passengers more quickly than motorbike, car, or bus travel and save them time. The improved public system will increase investment and access to services and labor opportunities. This will in turn help raise the incomes and living standards of the project areas' residents, entrepreneurs, and workers. The metro network will also reduce current pressure on housing capacity in the central part of the city by making commuting from outlying areas faster and easier.

3. Impact channels. Metro stations and trains will provide safe and accessible public transport to different groups of people, with easy access provided for women traveling with children, elderly persons, and the handicapped which has never been available before. Secure parking areas for motorbikes, bicycles, and cars and areas for local taxis will

²⁹ The Prime Minister's Decision No. 2014/QĐ-TTg, dated 10 Feb 2015 on the Approval of the revised strategy for Rail Road Transport Development strategy by 2020 and Vision by 2050.

³⁰ <http://www.adb.org/sites/default/files/institutional-document/33620/files/cps-vie-2012-2015-r.pdf>; para. 30

³¹ <http://www.adb.org/sites/default/files/linked-documents/40080-01-vie-sprss.pdf>

³² MOLISA. 2013. Decision No. 749/QĐ-BLDTBXH dated 13 May 2013. Hanoi.

be planned around the metro stations. Provisions to ensure passenger security and safety, especially during darkness, will be carefully planned and included safe pedestrian crossings and overpasses with traffic signals are included to reduce accidents. Separate public toilets will be available for men and women. Fares on the metro system will be universally affordable, and the metro system will be integrated with bus lines.

4. **Other social and poverty issues.** None.

5. **Design features.** The Ha Noi Metropolitan Railway Management Board (MRB), the Project Implementing Agency (IA) will include support for the design and installation of the metro ticketing system, including the calculation of the fare. The MRB will consider the affordability and the ability to pay of vulnerable groups of users, such as the poor and senior citizens and set the fares. During the project construction period, noise and air pollution, traffic constraints, and safety risks will temporarily increase and affect people living in the vicinity and traveling in the construction areas. MRB will inform the public of the construction and the safety procedures around the construction sites throughout the construction period. Risks exist of increased transmission of HIV/AIDS and sexually transmitted infections, increased human trafficking, and an influx of commercial sex workers into the construction areas. These risks will be mitigated during project implementation through a program to prevent HIV/AIDS and human trafficking that will be financed by both ADB and AFD resource via contractors' contracts within the project.

II. PARTICIPATION AND EMPOWERING THE POOR

1. Participatory approaches and project activities.

During the implementation of the current project, 322 affected households have been consulted on and participated in implementation of the resettlement plan. Project implementation information will be communicated to concerned stakeholders in due time.

2. Civil society. Representatives of mass organizations such as the Vietnam Women's Union and the Vietnam Fatherland Front³³ (an alliance of mass organizations in Viet Nam) have participated in consultation meetings related to resettlement plan implementation and other project activities.

3. Civil society organizations. The Vietnam Women's Union has a representative in the district resettlements and land acquisition committee which is a key stakeholder in the resettlement plan implementation

4. The following forms of civil society organization participation are envisaged during project implementation

M Information gathering and sharing M Consultation Collaboration Partnership

5. Participation plan Yes. No.

The project will mobilize CSO participation for information sharing and consultation during the implementation of Resettlement plan (phase 1), gender action plan (GAP) implementation and other actions related to project information sharing. Additionally, the project will engage a communication specialist to support stakeholders' consultation and to implement communication strategy within this project.

III. GENDER AND DEVELOPMENT

Gender mainstreaming category: Effective Gender Mainstreaming

A. Key issues. The gender issues and the GAP under the proposed additional financing will remain basically the same as those of the current project. The project design and monitoring framework (DMF) and the project sites will be unchanged. The gender issues relate to the different transport needs and behaviors of women and men. Women use public transport more than men do and play a major role in transporting children to school. Women travel to buy and bring family food and consumer items home. A growing number of urban and suburban women commute to work. This and travel to and from their children's schools and markets and shops through the increasingly congested road system is taking up an ever-greater share of their time. Traffic is also a major source of stress due to the safety risks. Rapid metro trains will provide a faster and safer transport alternative for women. The project has included gender consideration in project design, planning and implementation to ensure that the metro system will be accessible, safe, secure, comfortable, and affordable for women.

B. Key actions.

Gender action plan

The GAP under additional financing will remain basically the same as that of the current project It includes (i) employment targets for women and application of gender-specific core labor standards in all civil works and other transport services employment the project generates, (ii) inclusion of gender-inclusive physical design features, and (iii) mitigation of gender-related impacts of resettlement and potential negative social impacts. The GAP has been and will continue to be implemented by MRB with the technical support of the Project Management Support consultant under Additional Financing loan.

³³ <http://mattran.org.vn/home/gioithieumt/luatmt/lmттqv1.htm>

IV. ADDRESSING SOCIAL SAFEGUARD ISSUES	
A. Involuntary Resettlement 1. Key impacts. For Metro Line 3 (Nhon-Hanoi Station section), 156 households were affected by construction of the train depot and access rail line under the project. Construction of the underground stations will require the relocation of another 166 households and 20 organizations. The tunnel works may impact an additional 12 households. 2. Strategy to address the impacts. The Updated Resettlement Plans have been prepared for the depot and access line and underground sections following completion of detailed design. Disbursement of compensation payments is ongoing. The Updated Resettlement Plan for the tunnel will be prepared upon finalization of the assessment of impacts by the contractor. Compensation must be paid before these works can begin. 3. Plan or other Actions. <input checked="" type="checkbox"/> No action. Additional financing is provided to bridge cost overruns of the civil works contracts within the existing project scale and scope.	Safeguard Category: <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> FI
B. Indigenous Peoples 1. Key impacts. Only a few members of ethnic minorities live in the project area. They are fully integrated with the majority population groups and have full and equal access to social institutions and economic opportunities. No sociocultural groups present in the project areas can be considered indigenous peoples. Is broad community support triggered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 2. Strategy to address the impacts. not applicable (NA) 3. Plan or other actions. <input checked="" type="checkbox"/> No action	Safeguard Category: <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> FI
V. ADDRESSING OTHER SOCIAL RISKS	
A. Risks in the Labor Market 1. Relevance of the project for the country's or region's or sector's labor market: L <input checked="" type="checkbox"/> unemployment <input type="checkbox"/> underemployment <input type="checkbox"/> retrenchment M <input checked="" type="checkbox"/> core labor standards 2. Labor market impact. The MRB has included a specific provision in the bidding documents and civil works contracts to ensure that civil works contractors (i) comply with applicable core labor laws, (ii) do not pay men and women different amounts for work of equal value; (iii) do not employ child labor in the construction and maintenance activities; and (iv) maximize the employment of local poor and disadvantaged/affected persons.	
B. Affordability. Metro fares set by the government will need to be affordable for the poor and the near poor, as well as for students, seniors, and other economically disadvantaged groups. The project will include support for a ticketing system and calculation of fares set by the government which is expected to consider affordability for all users, including members of these disadvantaged groups, when deciding these fares.	
C. Communicable Diseases and Other Social Risks 1. The impact of the following risks are <input type="checkbox"/> Communicable diseases M <input checked="" type="checkbox"/> Human trafficking M <input checked="" type="checkbox"/> Others (HIV/AIDS and STI transmission) 2. Risks to people in project area. There are potential risks of the transmission of HIV/AIDS and sexually transmitted infections and or human trafficking during and after the construction. People near the construction areas will face greater safety hazards. A HIV/AIDS and human trafficking awareness and prevention and program and a road safety awareness program will be designed and implemented. Safe and convenient features for accessing to the metro by women, children, elderly people, and handicapped are part of the project design. This is covered by interventions under the GAP.	
VI. MONITORING AND EVALUATION	
1. Targets and indicators. Targets and indicators in the GAP and the DMF requiring compliance with include core labor standards, the provision of an HIV/AIDS and human trafficking communication program, and gender-sensitive design features in the civil works and the metro system's facilities. The GAP implementation arrangement in PAM calls for a MRB gender specialist together and a project gender consultant to monitor and report on these performance target and indicators. 2. Required human resources. Human resource requirements for carrying out the activities related to social and gender targets and monitoring performance include a gender specialist recruited by MRB, a gender consultant included under the Project Management Support Consultant's team and a communications specialist who together with the above mentioned specialists will be tasked to support, implement, and report on targets and indicators. 3. Information in the project administration manual. The PAM specifies that social and gender targets in the GAP and DMF are part of the project performance information system, and implementation review reports will be submitted to ADB as part of the project progress reports and at project completion. 4. Monitoring tools. Participation recording, reports, focus group discussions, key interviews, and structured questionnaires will be used.	

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Revised Project Design and Monitoring Framework

53. The Revised Design and Monitoring Framework (DMF) for the Project is in Table 9.1 below.

Table 9.1: Revised Design and Monitoring Framework

Impacts the Project is Aligned with			
Current Project			
An integrated sustainable public transport system in five districts of Ha Noi.			
Overall Project			
An integrated sustainable public transport system in six districts of Ha Noi ^{34 35} .			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome			
Current project Competitive metro rail services along the project corridor	Current project Peak loading of 785,000 passenger-km per day and 5,800 passengers per hour per direction on line 3 by 2017 Weighted average travel time per passenger along the project corridor reduced by 25% from 2011 baseline level of 52 minutes by 2017	Government and public transport operator statistics Benefit monitoring reports	Policy and regulatory reforms to support modal shift not enacted in a timely manner Public transport services are not financially sustainable.
Overall project Unchanged.	Overall project Peak loading of 785,000 passenger-km per day and 5,800 passengers per hour per direction on line 3 by 2020 Weighted average travel time per passenger along the project corridor reduced by 25% from 2011 baseline level of 52 minutes by 2020		

³⁴ The project's impact is aligned with the government's Five-Year Socio-Economic Development Plan, 2011–2015 as well as the government's Transport Strategy 2020 that identifies transport development as key to sustaining socioeconomic development.

³⁵ The number of districts covered by line 3 increased in 2012 from five to six after Tu Liem District was split into Tu Liem North and Tu Liem South for administrative purpose, without changing the physical coverage of the former Tu Liem District (footnote 12 of the RRP).

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Outputs Output 1 Current project Metro line 3 is operational</p>	<p>Current project 1a. Completion of 12.5 km tunneled and elevated track works, 12 stations and depot at Nhon, including gender-sensitive facilities at stations by the end of 2015 1b. Provision and operational commissioning of all systems, equipment, and rolling stock designed with gender-specific features by the end of 2019</p>	<p>Audited Project Financial Accounts Progress reports Project review mission reports Project completion reports</p>	<p>Lack of MRB's financial management capacity may pose an integrity risk and delay project implementation. Problems arising from limited experience in (i) implementing a large complex internationally supported project and (ii) integrating urban transport modes Delays in land acquisition and resettlement for main line station works Lack of a clear project communication plan may risk project transparency and public engagement</p>
<p>Overall project Unchanged.</p>	<p>Overall project 1a. Completion of 12.5 km tunneled and elevated track works, 12 stations and depot at Nhon, including gender-sensitive facilities at stations by the end of 2019 1b. Provision and operational commissioning of all systems, equipment, and rolling stock designed with gender-specific features by the end of 2019</p>		
<p>Output 2 Current project Improved implementation capacity of MRB Overall project Unchanged.</p>	<p>Current project 2a. All MRB staff meet minimum skills criteria of their positions by 2015 Overall project 2a. All MRB staff meet minimum skills criteria of their positions by 2019</p>	<p>Progress reports Project review mission reports</p>	

Key Activities with Milestones

1. Construct metro line 3, including stations and depot facilities, install E&M systems, provide rolling stock, and make metro operational (unchanged)
 - 1.1. Award all civil works contracts in August 2015 and complete civil works by June 2019 (changed)
 - 1.2. Provide and install E&M systems and rolling stock. Award all contracts by December 2015. Complete work by June 2019. Commission system by December 2019 (changed)
 - 1.3. Acquire all land and complete resettlement by December 2015 (changed)
2. Provide implementation capacity support to the MRB (changed)
 - 2.1. Complete detailed design by July 2013 (changed or completed)
 - 2.2. Consulting services for design verification mobilized by August 2011.
 - 2.3. Consulting services for project management support mobilized by April 2013.
 - 2.4. Consulting services for safety audit mobilized by March 2013 (changed or completed)
 - 2.5. Recruit consultant for phase 2 of project management support by June 2016 (added)

Inputs**ADB**

\$293.0 million (current)
 \$ 59.0 million (additional, OCR)
 \$ 5.8 (additional, ADF)
 \$357.8 million (overall)

CTF

\$ 0.0 million (current)
 \$50.0 million (additional)
 \$50.0 million (overall)

AFD

€110.0 million (current)
 € 69.0 million (additional)
 €179.0 million (overall)

DGT

€250.0 million (current)
 € 85.0 million (additional)
 €335.0 million (overall)

EIB

€ 73.0 million (current)
 € 70.0 million (additional)
 €143.0 million (overall)

Government of Viet Nam

\$221.2 million (current)
 \$ 24.0 million equivalent (additional)
 \$245.2 million equivalent (overall)

Assumptions for Partner Financing**Current Project**

AFD will provide cofinancing under collaborative administration and parallel procurement for outputs 1 and 2.

DGT will provide cofinancing under collaborative administration and parallel procurement for output 1.

EIB will provide cofinancing under collaborative administration and parallel procurement for output 1.

Overall Project

AFD will provide cofinancing under collaborative administration and parallel procurement for output 1.
 EIB and DGT unchanged.

ADB = Asian Development Bank, AFD = Agence Française de Développement, CTF = Clean Technology Fund, DGT = Direction Générale du Trésor (General Directorate of Treasury), EIB = European Investment Bank, E&M = electrical and mechanical, km = kilometer, MRB = Ha Noi Metropolitan Railway Management Board, OCR = ordinary capital resources.

Source: Asian Development Bank.

B. Monitoring

54. **Project performance monitoring.** The MRB will establish a project performance monitoring system. ADB through the project performance reporting (PPR) system will rigorously monitor the overall performance of each project under the investment program. The MRB will refine the monitoring system within 6 months from project commencement and collect and update baseline data for performance monitoring. The key indicators and targets, assumptions, and risks outlined at the impact, outcome, and output levels in the investment program's design and monitoring framework will be the primary data required for analysis. For this purpose, ADB inception mission will provide to MRB a checklist of the above data, which will be updated in track changes and reported quarterly through the MRB's quarterly progress reports and after each ADB review mission. These quarterly reports will provide information to regularly update ADB's project performance reporting system³⁶.

55. MRB will involve the beneficiaries in the collection of data on impacts and outcomes. During each review mission, the updated project performance will be shared with the interested representatives of project beneficiaries.

56. **Compliance monitoring:** Compliance for all the Loan agreement undertakings and loan covenants — urban transport sector reforms, social and environmental safeguards, financial, economic, and others — will be jointly monitored by MRB and ADB through monthly updates provided by the MRB. In this respect, the MRB will submit to ADB a status report on the covenants summary with the explanation and time-bound actions on partly or non-complied covenants. As part of the joint venture efforts, ADB's resident mission will hold quarterly review meetings with the MRB to ensure the full compliance of all the loan covenants.

57. In addition, HPC and ADB shall undertake, at the end of the second year of Project implementation, a comprehensive midterm review. At the conclusion of the mid-term review, ADB and the Borrower may agree on changes in both Project scope and implementation arrangements, as deemed necessary.

C. Safeguards monitoring:

1. Environment

58. The following environmental tasks are included in the terms of reference of the PMS – phase 2 consultant: (i) Monthly monitoring of the environmental performance of contractors in terms of implementation of mitigation measures as well as required monitoring activities (such as land subsidence and settlement monitoring at the underground section to be carried out by tunnel boring machine contractor, etc.) for pre-construction and construction phase as specified in the EMP and preparation of corresponding semi-annual environmental monitoring reports for submission to ADB; (ii) environmental effects monitoring (air quality, noise, vibrations, water quality, soil/excavation spoils, etc.) during pre-construction and construction phases for the depot, viaduct and tunnel components as specified in the EIA prepared based on ADB requirements; (iii) through an independent/external environmental auditing expert, verification of the veracity of the monitoring information provided in the monthly and semi-annual monitoring reports submitted by MRB to ADB; and (iv) Environmental management capacity building for MRB as specified in the EIA. MRB will provide the resources to ensure that regular

³⁶ ADB's project performance reporting system is available at:
<http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool>

environmental monitoring will continue without interruption. As specified in the EIA, MRB will establish an Environment Management Unit staffed by a qualified and experienced environmental officer and an occupational health and safety officer.

59. Tunnel Boring Machine (TBM) Contractor. Prior to start of TBM operations, the contractor must undertake the following tasks as specified in the EIA/EMP prepared based on ADB requirements: (i) implement a survey program to monitor the background subsidence rate along the project line (details are provided in EMP Table 9.7 of the EIA), (ii) use the monitoring data to assess potential damage that the observed subsidence may cause to buildings under or alongside the tunnels and to estimate the cumulative amount of regional subsidence during the construction stage, (iii) take photographs of each structure within the possible affected zone before the construction starts, to be used for assessing potential damage due to subsidence, and (iv) depending on the results of the assessment, develop and implement suitable mitigation measures to avoid or minimize damage to properties

a. Resettlement

60. A draft resettlement plan (RP) for the whole Metro Line 3 was agreed between ADB and the Government in 2011. In February 2014, ADB approved an updated RP for the depot and access line following further consultations and detailed measurement surveys. Compensation payments were conducted from December to January 2015. An updated RP is being prepared to cover impacts from the underground section following an updated/improved set of entitlements for the affected households, consultations and surveys. Approval of the updated RP by ADB is a condition for the award of contracts, while the completion of compensation and provision of assistance to affected households is a condition for commencing civil works. Internal and external monitoring of resettlement activities for the entire alignment is being conducted. Issues and updates on resettlement are also discussed in the monthly joint-donors meetings. The project has no impacts related to indigenous peoples' issues.

61. **Gender and social dimensions monitoring:** The MRB will submit quarterly reports to HPC and ADB including the Gender Action Plan monitoring table updates on the status of implementation³⁷.

62. MRB will ensure that all Works contracts under the Project incorporate provisions and budgets to the effect that contractors: (a) comply with the Viet Nam's applicable labor laws and related international treaty obligations and do not employ child labor; (b) provide safe working conditions, and water and separate sanitation facilities for male and female workers; (c) provide equal wages to male and female workers for work of equal value; and (d) carry out the HIV, Illicit Drugs, and Human Trafficking Prevention Program in the construction campsites with such Program being held in coordination with the Government's programs and other initiatives.

D. Evaluation

63. Within 6 months of the loan effectiveness, MRB, assisted by the project supervision consultants, will establish baseline data for the performance indicators and targets for evaluating project performance in relation to the Project's impacts, outcomes, and outputs. Within 6 months of physical completion of the Project, MRB will submit a project completion

³⁷ADB's *Handbook on Social Analysis: A Working Document*, is available at: <http://www.adb.org/Documents/Handbooks/social-analysis/default.asp>, *Staff Guide to Consultation and Participation*: <http://www.adb.org/participation/toolkit-staff-guide.asp>, and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>

report to ADB³⁸. The performance indicators and targets will be measured 6 months and 3 years after project completion, and compared with the baseline data. MRB will submit a report summarizing key findings of the project performance monitoring and evaluation to ADB.

64. ADB will field an inception mission within 3 months after signing of the loan agreement. Review missions will be carried out on a semiannual basis jointly by representatives of ADB, Borrower, and the MRB. The review missions will assess the status of the project implementation including procurement, civil works, financing, compliance to environmental and social safeguards, and the road sector sustainability. Site visits are required for all projects with environment or social impacts. A mid-term review mission will be carried out 2 years after each loan becomes effective. Each mid-term review will evaluate compliance with the terms, conditions, and undertakings set out in the environmental and social safeguards, and loan covenants set out in the loan agreements. The review will allow for any necessary midcourse corrections to ensure successful implementation and the achievement of the project objectives. Within 6 months of physical completion of each project, the MRB will submit a project completion report to ADB.³⁹

E. Reporting

65. The MRB will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6 months of physical completion of the Project. To ensure projects continue to be both viable and sustainable, project accounts and the executing agency AFSs, together with the associated auditor's report, should be adequately reviewed.

66. The MRB will establish a project performance monitoring system within 6 months from loan effectiveness and collect baseline data for performance monitoring. The key indicators and assumptions outlined at the impact and outcome levels in the investment program's design and monitoring framework will be the primary data required for analysis

F. Stakeholder Communication Strategy

67. There are two primary objectives under the Stakeholder Communication Strategy:

- (i) Ensure that all people or entities possibly affected by the project are aware of and clearly understand the project, its impacts and compensation entitlements, and meaningfully address stakeholder concerns using transparent and inclusive approaches;
- (ii) Ensure that all possible beneficiaries of the project are aware of and understand the project and its benefits, and the details of making use of the metro system. Foster demand amongst these target stakeholders for the regular use of the metro;

³⁸ Project completion report format available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

³⁹ Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

68. To ensure effective communication with stakeholders during project implementation, and to enhance project outcomes, the project will adopt a two-pronged communication strategy:

- (i) Deliver relevant project information to project affected people and other stakeholders possibly impacted by the project in a culturally appropriate, gender-sensitive, and timely manner, and foster a regular two-way flow of information between project implementers and these stakeholders;
- (ii) Support intensive, sustained, broad and repetitive communication, education, marketing and advocacy about the benefits of the project to foster positive public behavior change and encourage widespread use of the new Line 3 and other metro lines; and

69. Different stakeholder groups will be targeted for different communication activities. The first key group of stakeholders is people potentially affected by the project, which includes residents and businesses along the main metro line routes, private transport service providers, as well as community leaders and community organizations. The second key group is the public at large in Ha Noi, who will be encouraged to take advantage of the new metro. Public concerns about the project may include traffic impacts during construction, and any possible impacts on cultural heritage. The public are also target users of the metro system. Within this general stakeholder group, students, young professionals and government employees will be primary targets, as they are envisioned as particularly utilizing the new system.

70. The PMU/EA will be responsible for implementing and monitoring all stakeholder communication, marketing, education, and information dissemination and disclosure, and will identify a focal point who will be designated for regular contact with affected people and other interested stakeholders.

71. Delivering information to project affected people: Information about the project as a whole, including information about project plans, projected impacts, and implementation timelines, will be provided through a project fact sheet and a public information booklet (PIB) that will be disseminated to stakeholders that may be affected by the project. These materials will describe the project's objectives, components, and activities. Written in Vietnamese, the fact sheet and PIB will use simple, straightforward language, supported by pictures, to make the project comprehensible to a wide range of stakeholder groups including the poor and women. The PIB will highlight all key aspects of the project, including features that will directly benefit stakeholders. The fact sheet and PIB will be complemented with consultations and community meetings about the project, to facilitate direct dialogue. As much as possible, each stakeholder group will be met with separately, as they may have different interests. Information will also be shared through other culturally appropriate communication channels, including a full range of traditional and electronic media, and key information materials may be developed for distinct stakeholder groups. Pursuant to ADB's Public Communications Policy, all requisite project documents will be posted on the ADB website.

72. Delivering information to the public: The general public will be impacted by changes in traffic during construction, and may also be concerned about possible impacts to cultural heritage, given the project's proximity and possible impacts to cultural treasures like the Temple of Literature and Bich Cau temple. A full array of community-level, mass media and social media channels will be used to proactively inform the public about the project, any possible impacts, and actions being taken to mitigate these impacts.

73. Obtaining feedback and ensuring two-way information flow: The PIB and other information materials will indicate where stakeholders can get in touch with project implementers and the designated focal point. Community meetings and other information dissemination and outreach will ensure that accurate and sufficient feedback will be received from stakeholder groups.

74. Disclosure: Pursuant to ADB's Public Communications Policy, all requisite project documents will be posted on the ADB website, and relevant documents and information will also be shared on the project website, which will include at a minimum the following information: (a) bidding procedures, bidders, and contract awards; (b) use of the funds disbursed under the project; and (c) physical progress

75. Promotion of the metro system: To encourage widespread use and ridership on the new metro, sustained communication, education, marketing and advocacy activities will be carried out, which will include advertisements on traditional (print, billboards) and electronic (broadcast, internet, mobile) platforms. Regular public relations activities will be carried out to ensure regular media coverage of the project's progress, with positive stories highlighting the benefits of the metro for individuals. A metro website will be established, as well as social media platforms, so the public can easily access information about the metro system, make suggestions and share concerns, and have their ideas responded to in real time. Posters, leaflets, and other collateral products will be produced for dissemination, and information displays will be established at the airport and other transportation hubs.

76. Direct marketing: Promotion, information dissemination and in-person outreach will be conducted with schools, universities, hospitals, large companies, and government entities along metro line corridors to better present the vision of the metro, its convenience, and its benefits for individuals and the public at large.

77. Incentive schemes: The project will explore the use of low-cost incentive programs to encourage early-stage ridership, as well as sustained incentive programs such as student discounts and public employee cost offsets.

78. Civil works safety: For some project activities, specific means of delivering information to stakeholders are required. For civil works, clear signage will be put up in strategic areas not just to provide summary information about the project and its construction, but also to ensure public safety.

79. Resources: Sufficient human and financial resources will be allocated to ensure that the activities set forth in the Stakeholder Communication Strategy can be carried out in full, from project preparation through full project implementation.

80. A Disclosure Plan is set forth in Table 9.2, below, followed by a Communication Strategy Matrix in Table 9.3

Table 9.2: Disclosure Plan

Project Documents	Means Of Communication	Responsible Party	Frequency	Audience(s)
Project Information Document (PID)	ADB's website	ADB	initial PID no later than 30 calendar days of approval of the concept paper; quarterly afterwards	General Public
Design and Monitoring Framework (DMF)	ADB's website	ADB	draft DMF after post fact-finding mission	Project-affected people
Environmental Assessments	ADB's website	ADB	at least 120 days before Board consideration	General Public, project-affected people in particular
Resettlement Documents	ADB's website	ADB	post fact-finding mission	General Public, project-affected people in particular
Reports and Recommendations of the President	ADB's website	ADB	within 2 weeks of Board approval of the loan	General Public
Legal Agreements	ADB's website	ADB	no later than 14 days of Board approval of the project	General Public
Initial Poverty and Social Assessment	ADB's website	ADB	within 2 weeks of completion	General Public, project-affected people in particular
Documents Produced under Technical Assistance	ADB's website	ADB	within 2 weeks of completion	General Public
Project Administration Memorandum	ADB's website	ADB	After loan negotiations	General Public
Social and Environmental Monitoring Reports	ADB's website	ADB	Routinely disclosed, no specific requirements	General Public, project-affected people in particular
Major Change in Scope	ADB's website	ADB	within 2 weeks of approval of the change	General Public
Progress Report on Tranche Releases	ADB's website	ADB	within 2 weeks of Board or management approval	General Public
Completion Reports	ADB's website	ADB	within 2 weeks of circulation to the Board for	General Public

Project Documents	Means Of Communication	Responsible Party	Frequency	Audience(s)
Evaluation Reports	ADB's website	ADB	information Routinely disclosed, no specific requirements	General Public
<i>Performance of the Project with clearly defined information requirements and indicators, policy on roads construction and reconstruction, 5-year investment plan, business opportunities, bidding process and guidelines, results of bidding process, and summary progress reports of the ongoing projects.</i>	The borrower's Website	The borrower (Executing Agency)	per project progress, no longer than monthly	General Public

Table 9.3: Communication Strategy Matrix

	Objectives	Key Risks	Main Stakeholders	Messages	Means of Communication (Channels/Languages Activities)	Timeline	Responsibility	Resources
1	Ensure that all people/ entities possibly affected by the project are made aware of and clearly understand the project and its impacts. Regular two-way flow of information between the project and stakeholders, with stakeholders able to share concerns and have these addressed in a timely, transparent manner.	<p>Residents along the rail corridor and around stations oppose project due to perceived negative impacts – i.e., noise, dust, inconvenience.</p> <p>Businesses along the rail corridor and around stations oppose project due to concerns over loss of customers/ revenue.</p> <p>Bus, taxi and/or xe om (motorcycle taxi) drivers oppose project due to concerns over loss of income/ livelihood.</p> <p>Project affected people needing resettlement oppose project</p> <p>Public discontent due to negative traffic impacts during construction</p>	<p>Residents along the rail corridor and around stations.</p> <p>Businesses along the rail corridor and around stations.</p> <p>Bus, taxi and/or xe om (motorcycle taxi) drivers.</p> <p>Project affected people needing resettlement.</p> <p>General public</p>	<p>TBD. Measures will be taken to mitigate impacts. The project will help preserve Hanoi as a city first for people, rather than just vehicles.</p> <p>TBD. Measures will be taken to mitigate impacts.</p> <p>TBD. Mitigation measures will be taken as needed.</p> <p>TBD. If cases where resettlement is required, affected households will be fully and fairly compensated.</p> <p>Proactive, transparent dissemination/ explanation of impacts, timelines,</p>	<p>Regular consultations and community meetings with affected people.</p> <p>Dissemination of project fact sheet and public information booklet (PIB) – Vietnamese language, with pictures and illustrations to make the project comprehensible to a wide range of audiences. The PIB and other information materials will indicate where stakeholders can get in touch with project implementers and the designated communication focal point.</p> <p>Public information boards and other regular community-level information sharing.</p> <p>Media (television, radio, newspaper, online, social)</p> <p>Develop key information materials for distinct stakeholder groups, if needed.</p> <p>Disclosure of all requisite project documents on the ADB website and MPWT project website, including:</p>	From outset of project through implementation.	PMU, EA, IA	<p>Budget for consultations, feedback.</p> <p>Budget for PIB, fact sheet, other content development and dissemination.</p> <p>Communication Specialist or communications support</p> <p>Human resources for regular media engagement.</p> <p>Capacity building budget</p>

	Objectives	Key Risks	Main Stakeholders	Messages	Means of Communication (Channels/Languages Activities)	Timeline	Responsibility	Resources
		<p>Public concerns over possible cultural impacts (i.e., Temple of Literature, Bich Cau temple)</p> <p>Communication and consultation not adequately resourced</p> <p>Capacity constraints for those responsible for communication, consultation.</p> <p>Lack of commitment to consulting key stakeholders and addressing their concerns, resulting in one-way communication.</p> <p>Lack of information provided to stakeholders about the stages and process of the project.</p> <p>Lack of stakeholder awareness on how to raise concerns with appropriate officials.</p>	<p>General public</p> <p>PMU, EA, IA, ADB</p> <p>PMU, EA, IA</p> <p>PMU, EA, IA</p> <p>All primary stakeholders, PMU, EA, IA</p> <p>All primary stakeholders, PMU, EA, IA</p>	<p>mitigation measures.</p> <p>All necessary measures will be taken to preserve and protect cultural heritage.</p> <p>NOTE: Other key messages will be developed that address: (1) Project phases, components, benefits, impacts, and timeline; (2) the development and implementation stages of the project components; (5) other critical issues, including the importance of communications, as well as problem solving, and places to register public complaints.</p>	<p>(a) bidding procedures, bidders, and contract awards; (b) use of the funds disbursed under the project; and (c) physical progress.</p>			

	Objectives	Key Risks	Main Stakeholders	Messages	Means of Communication (Channels/Languages Activities)	Timeline	Responsibility	Resources
2	<p>Ensure that all possible beneficiaries of the project are aware of and understand the project and its benefits during construction phase.</p> <p>In the lead-up to opening of the line, and once it is completed, foster demand amongst target stakeholders for the regular use of the metro.</p>	<p>Public sentiment toward the metro turns negative during construction due to worsening traffic.</p> <p>Public doesn't use new metro system – sticks to cars and motorbikes: project not financially sustainable.</p> <p>Key stakeholders not mobilized.</p> <p>Poor messaging.</p> <p>Lack of commitment to sustained marketing and communication to foster demand.</p> <p>Communications not resourced adequately.</p> <p>Capacity constraints: managing complex communications and marketing campaign.</p>	<p>The public at large in Hanoi, particularly students, government employees and young professionals.</p> <p>Secondary stakeholders include those who can help advocacy and mobilization efforts, including Youth Union, Women's Union representatives, Hanoi People's Committee, bilateral and development partners, PMU/EA/IA, and other project counterparts.</p>	<p>TBD. Line 3 should be operational in 2018.</p> <p>With the new system, people will be able to ride in a modern, safe, clean, comfortable, affordable metro rail system.</p> <p>Using the metro will save commuters significant time and money.</p> <p>Metro fares will be comparatively affordable, saving money on fuel and parking fees.</p> <p>The metro will help keep Hanoi a green city.</p> <p>NOTE: Other key messages will be developed as required.</p>	<p>Construction phase: notification of construction through postings on public announcement systems, media, Youth and Women's Union, and via local officials.</p> <p>Promotion of the metro– a sustained communication, education, marketing, behavior change and advocacy campaign will be implemented.</p> <p>Advertisements in traditional media platforms (print, billboards) and electronic media (broadcast, web, mobile).</p> <p>Regular public relations activities.</p> <p>Production of a suite of marketing materials.</p> <p>Metro website, with information and content updated in real time. Full range of content – stories, photo, video, etc.</p> <p>Establish full array of Metro social media platforms, with real-time monitoring, information sharing and interactions.</p> <p>Produce and disseminate posters, leaflets, and other</p>	<p>From outset of project through implementation.</p>	<p>PMU, EA, IA</p>	<p>Budget for information material development and dissemination.</p> <p>Budget for development of complex communication, marketing, education and advocacy campaign, with development of a full range of content, including regular, sustained print and multimedia fit for multi-platform use.</p> <p>Capacity building budget</p> <p>Communication specialist(s) – budget for consultancy support</p> <p>Budget for community engagement and</p>

	Objectives	Key Risks	Main Stakeholders	Messages	Means of Communication (Channels/Languages Activities)	Timeline	Responsibility	Resources
					<p>collateral products.</p> <p>Information displays at the airport and other transportation hubs.</p> <p>Community-level promotion and mobilization.</p> <p>Direct marketing, promotion, information dissemination and in-person outreach about the Metro in schools, universities, hospitals, large companies, and government entities along metro lines to encourage ridership.</p> <p>Incentive schemes: introduce low-cost incentive programs to encourage early-stage ridership. Introduce sustained incentive programs for certain stakeholders, i.e., student discounts, and public employee cost offsets.</p> <p>Information dissemination through community-level communication channels, including community leaders, Youth Union, Women's Union.</p>			<p>mobilization efforts.</p> <p>Human resources for regular content production, platform management and media engagement.</p> <p>Human resources for outreach to schools, companies, government entities, etc.</p> <p>Budget and human resources to develop and implement incentives program.</p>

X. ANTICORRUPTION POLICY

81. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project.⁴⁰ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.⁴¹

82. To support these efforts, relevant provisions are included in the Loan agreement and the bidding documents for the Project.

83. The Government and HPC will comply with, ADB's Anticorruption Policy (1998, as amended to date) and the Combating Money Laundering and the Financing of Terrorism Policy (2003). The Government (i) acknowledges ADB's right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the Project; (ii) agrees to cooperate fully with, and to cause HPC to cooperate fully with, any such investigation and to extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for the satisfactory completion of any such investigation; and (iii) agrees to refrain, and cause the HPC to refrain, from engaging in money laundering activities or financing of terrorism and shall allow, and cause HPC to allow, ADB to investigate any violation or potential violation of these undertakings.

84. HPC will conduct periodic inspections on the contractors' activities related to fund withdrawals and settlements, and the Government and HPC will ensure that all contracts financed by ADB in connection with the Project include provisions specifying the right of ADB to audit and examine the records and accounts of all contractors, suppliers, consultants and other service providers as they relate to the Project.

85. HPC will publicly disclose on the website information how Loan proceeds are being used, presenting (i) procurement contract awards, including for each such contract (a) the list of participating bidders, (b) name of the winning bidder, (c) basic details on bidding procedures adopted, (d) amount of the contract awarded, (e) list of Goods and/or services purchased, (f) intended and actual utilization of Loan proceeds under each contract, and (ii) internal and external resettlement reports. The website will be updated within 2 weeks after: (i) each award of contract, (ii) each submission of the EMA's quarterly resettlement report, and (iii) each submission of MRB's internal quarterly resettlement reports.

XI. ACCOUNTABILITY MECHANISM

86. People who are, or may in the future be, adversely affected by the project may address complaints to ADB, or request the review of ADB's compliance under the Accountability Mechanism.⁴²

XII. RECORD OF PAM CHANGES

87. All revisions/updates during course of implementation should be retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

⁴⁰ Available at: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

⁴¹ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

⁴² For further information see: <http://compliance.adb.org/>.

TERMS OF REFERENCE

Technical Assistance to the Ha Noi Metropolitan Railway Management Board (MRB) for the Implementation of Ha Noi Pilot Urban Railway Line Project UMRT 3 Phase 2

1 INTRODUCTION

1.1 Purpose of these Terms of Reference

1. The Ha Noi Pilot Light Metro Line is one of the urban rail lines in Ha Noi proposed in the HAIDEP Study⁴³ completed in March 2007, where it is referred to as Urban Mass Transit Line 3 (UMRT3). The HAIDEP recommendations form the basis for the Ha Noi 2020 Transport Master Plan which was approved by the Prime Minister in July 2008. Preliminary/Basic engineering designs were prepared by Consultants SYSTRA S. A. in November 2008⁴⁴. The feasibility study (FS) for the project prepared by Consultants SYSTRA⁴⁵ was approved by the Ha Noi Peoples Committee (HPC) through the Ha Noi Metropolitan Railway Management Board (MRB) in April 2009.

2. **The approved scope of the project includes civil works, equipment, consulting services and resettlement for the implementation of a metro line of about 12.5 kilometres with 12 stations (eight elevated and four underground). The total approved project cost is equivalent to about US\$ 1077 million. Implementation commenced in 2010 with initial works on the depot. The original target completion date of December 2016 has been set under the latest General Work Program and approved by HPC. MRB is the Project Owner.**

3. The implementation of the Ha Noi Pilot Light Metro Line is financed with loans from a number of Financiers to the Government of Vietnam (GoV). The Asian Development Bank (ADB) is providing US\$ 293 million (220 Million Euro equivalent), the European Investment Bank (EIB) is providing US\$ 95 million (73 Million Euros) and two French Government Agencies - Direction Generale du Tresor (DGTresor) and Agence Francaise de Development (AFD) are providing US\$ 325 million (250 Million Euros) and US\$ 143 million (110 Million Euros) respectively.

4. The internal approval process that the HPC has used to prepare Phase 1 of Metro Line 3 has resulted in effectively separating the Project into components rather than one overall coherent project⁴⁶, which consists of:

- (i) consulting services for project preparation, detailed design, construction supervision and relevant support services,
- (ii) construction of Metro Line 3 mainline, including stations and depot facility civil works, installation and operation Electrical and Mechanical (E&M) systems, and rolling stock;

⁴³ *The Comprehensive Urban Development Programme in Hanoi Capital City in the Socialist Republic of Vietnam* Final Report March 2007 – ALMEC Corporation, Nippon Koei Co.Ltd., YACHIYO Engineering Co.Ltd. Japan International Cooperation Agency and Hanoi People's Committee

⁴⁴ In Vietnam the two key stages in the engineering design process are often referred to as Basic Design and Technical Design in place of the more generally used terms Preliminary Design and Detailed Design.

⁴⁵ Ha Noi Pilot Light Metro Line Feasibility Study Final Report SYSTRA April 2009

⁴⁶ Two major components have separate Project Description Outline (PDO) approved by the Prime Minister, and to re-submit as one combined project would result in delays to implementation.

- (iii) consulting services for project implementation support and capacity development for MRB and HPC transport agencies,
- (iv) integrated sustainable urban transport facilities and measures; and
- (v) other ancillary requirements, including incremental administration, and land acquisition and resettlement.

5. Items (i) and (ii) are referred to as the Ha Noi Pilot Metro Line 3 Construction Project. Item (iii) covers the implementation support and capacity building program for MRB, that ADB requires GoV to put in place. ADB will finance these items under a separate project loan.

6. The ADB Loan Agreement for the UMRT Line 3 Project specifically states in Schedule 5 Paragraph 3 that “The Borrower shall ensure that the capacity building program for strengthening MRB’s capacity is implemented in time to ensure the timely and successful implementation of the project. The consulting services for project implementation support and capacity development are expected to contribute to further strengthening MRB’s and HPC’s capacity in Project Management.

7. These Terms of Reference (TOR) are for the consulting services for project implementation support and capacity development.

Name of the consultancy: Project Implementation Support to MRB
Funds for the consultancy: ADB loan under the proposed “Ha Noi Metro Line 3 Project” Processed together with the Additional Financing.
Type of selection: International Competitive Bidding Mode of selection: Full Technical Proposal
Method of Evaluation: Selection Based on Quality and Cost (QCBS); 80% Quality, 20% Cost
Type of Contract: Time-Based
Estimated time for fulfillment of the Services: Until project completion (estimated at 4 years)

1.2 Overview of Metro Line 3 Construction Project

1.2.1 Key Information

Project Name: Ha Noi Pilot Urban Railway Line Project or UMRT 3 or Line 3, Section Nhon-Ha Noi Railway Station
Executing Agency (EA): Ha Noi People’s Committee (HPC).
Implementing Agency (IA): Ha Noi Metropolitan Railway Management Board (MRB).
IA Address: 8, Ho Xuan Huong, Hai Ba Trung, Ha Noi, Vietnam;
IA Tel/fax: +84 (04) 39435127 (04 39435126)
 The IA (MRB) will directly manage the Project.
Place of construction: The Project is to be constructed along the West-East corridor and goes through the districts: Tu Liem South, Tu Liem North, Cau Giay, Ba Dinh, Dong Da, Hoan Kiem – Ha Noi City;
Time and Schedule: The Construction General Works Program (CGWP) VXX of June 2014⁴⁷ shows a comprehensive implementation schedule of the Project contracts from 2014 to end of 2018.

1.2.2 Objectives of the Project

- Building an Urban Railway Line complying with the Plan for transport development of Ha Noi Capital up to 2020 approved by the Prime Minister in his decision ref no. 90/2008/QD-TTg dated 09 July 2008.

⁴⁷ SYSTRA-Document CGWP 18-E-2A 05-06-14

- Developing synchronously urban infrastructural system in line with modernization in order to improve the public transportation capacity, answer requirements for social-economic development of the Capital, disentangle the congestion occurrences, improve the safety in traffic, reduce pollution caused by traffic in the center area of Ha Noi.

1.2.3 Scale of the Project

8. Based on the Decision ref no. 1970/QĐ-UBND dated 27 April 2009 of HPC for the approval of the Feasibility Study of the Project hereinafter referred to as the “Decision”, the Project is described as follows.

Contents: Construction of a urban mass rail transportation (UMRT) system in Ha Noi City, from Nhon to Ha Noi Railway Station (the first section of Line 3, according to the Plan for transport development of Ha Noi Capital up to 2020 approved by the Prime Minister in his decision ref no. 90/2008/QĐ-TTg dated 09 July 2008).

Scope of investment: The main parts of the system are:

- Maintenance Depot with stabling area,
- Access line to Depot,
- 8.5 km elevated viaduct section,
- 8 elevated stations,
- 4 km 2xsingle tube underground section including turn back facility,
- 4 underground stations and 1 escape shaft,

The main features of the system are

- Double line track on separate guideway
- CBTC signaling system
- Fully automated system, but not driverless mode
- Rolling stock, approximately 25, 4-5 car trains, length 80m - 100 m
- Power supply system
- Third Rail system
- Communication and radio systems
- Electrical and Mechanical systems (E&M)
- Various Scada systems
- Central Control Room
- Ticketing system
- CCTV system
- Fire fighting systems
- Others sub-systems.

9. The systems will be designed and built according to international and local standards and regulations.

1.2.4 Investment Cost and funding of the Project

10. The total Investment Cost at appraisal is about \$990.5 million equivalent (as of HPC’s decision ref no. 1970/QĐ-UBND dated 27 April 2009). The project is funded as shown in the table below:

Financier	Amount	Comment
French Government (DGTresor)	€250 million	For procurement of French goods and services
French Agency for Development (AFD)	€110 million	Untied loan
European Investment Bank (EIB)	€73 million	Untied loan

Asian Development Bank (ADB)	USD 293 million	Untied Loan
Government of Vietnam	€130 million	Counterpart Funds

11. The adjusted TIC, based on the total cost of the modified TIC prepared in March 2012, being about (\$1,376 million⁴⁸ was approved by HPC on 28 June 2013. Based on the latest contract package estimates⁴⁹, a detailed adjusted TIC and financing plan has been prepared and agreed in principle between HPC, MRB and the donors. Funding for the increased costs has not yet been secured, however, in general, committed by the donors.

1.2.5 Procurement

12. The project will be contracted in 9 packages

Package	Title	Main Scope
Package 1	Elevated section	Viaduct, Bridges, Access ramp to depot, Above ground part of ramp to underground station
Package 2	Elevated section stations	Structures Architectural finishes Low voltage and plumbing
Package 3	Underground section Tunnels and Stations	Structures Architectural finishes Low voltage and plumbing
Package 4	Depot Infrastructure	
Package 5	Depot buildings and workshops	
Package 6	Rail systems 1	Rolling stock, Signaling system, Telecom, OCC/SCADA, Power Supply, Depot equipment
Package 7	Rail systems 2 Electrical and Mechanical	E&M systems, Ventilation systems, Fire fighting systems, Lifts and escalators, Dewatering
Package 8	Rail system 3- Track Works	
Package 9	Automatic Fare Collection (AFC)/Ticketing system	

13. These packages will be subject to international bidding. Apart from this the project owner (MRB) will let various small local contracts in relation to relocation of utilities, site clearance, relocation of land owners, etc.

1.2.6 Project Implementation Consultant (PIC)

14. SYSTRA has already been assigned as the PIC and is responsible for
- 1) Review and fulfillment of the previous FS of the Project (completed)
 - 2) Technical Design (in progress);
 - 3) Procurement activities, tender documents, and assistance with tender evaluation and contract negotiations
 - 4) Management and Supervision of the contracts under the Project;

⁴⁸ Based on exchange rate as of August 2015

⁴⁹ CP01, CP04, CP05 based on negotiated or actual contract amounts; CP02, CP03 based on approved estimates; CP06-09 based on latest cost estimates by Systra.

- 5) Assistance for training and operation;
- 6) Some other activities of the main construction and delivery contracts (packages 1 to 9 above).

1.2.7 Summary of current status of project

Contract Awards

Package (Financier)	Contractor	Contract Start	Contract Finish (original)
CP-01 "Elevated section – Line (AFD/ EIB)	DAELIM, Korea	Apr 14	Nov 16
CP-02 "Elevated stations (AFD/EIB)	POSCO, Korea	Aug 13	Aug 18
CP-03 "Design, Construction of underground section and underground stations (ADB)	JV Hyundai-Ghella	Oct 15	Jun 19
CP-04 "Depot infrastructure" (AFD)	VINACONEX, Viet Nam	Sep 10	Nov 14 (2 nd Extension being processed)
CP-05 "Depot architectural works" (AFD)	HANCORP, Viet Nam	Oct 12	Oct 18
CP-06 "Design, supply and installation of the rolling stock, power supply, OCC/SCADA, signaling and telecommunication" (DGT)	Not yet awarded	N/A	N/A
CP-07 "Design, supply and installation of the electromechanical equipment" (AFD)	Not yet awarded	N/A	N/A
CP-08 "Design, supply and installation of the 3rd rail system" (EIB)	Not yet awarded	N/A	N/A
CP-09 "Design, supply and installation of the automatic fare collection system (DGT)	Not yet awarded	N/A	N/A
Consultants			
IC for Design, Supervision and Implementation of the Project (DGT)	SYSTRA, France	2007	Nov 13 (Contract extended to Apr 18)
IC 2.1.b2 for Verification of Technical Design, Cost Estimates and Appraisal of Tendering Documents (AFD)	SENER, France	Apr 12	Contract completed Dec 14
IC 2.1.b3 for Project Management Support to the Client (AFD)	IDOM, Spain	Jan 13	Contract completed Sep 15
IC 2.2: Certification of System Safety (AFD)	JV Apave International, France/Bureau Veritas, Vietnam	Jan 14	Not yet finalized

Progress under Contracts

CP01 – Elevated section:

Commenced on 4/7/2014, passing 14 months of implementation, 14% of contractual amount has been completed. The site and stations area have been fenced, mobilized 9 drilling machines and drilling of bored piles is ongoing. Construction design and cost estimate of the utility line removals have been finalized. MRB is awaiting specialized departments approval. It is expected that DOT, DOIT, DOC will have appraisal results for the basis to the direct bidding of a specialized bidder in October 2015. Priority goes to special bridges, ramp to depot of CP01 and station S8 of CP02 in October 2015. Scheduled progress by end of 2015: Mobilize all 16 machines on site, complete entire pile boring of 1410 piles and construction of 382 pile shafts and pedestals, complete relocation of the 110kV power line Chem – Hadong.

CP02 – Elevated station:

Commenced in 27/5/2014, passing 16 months of implementation, 21% of contractual volume has been completed. Completed the construction of boring piles at stations. Construction of sheet pile and excavation of foundation pits. Construction design and cost estimate of the utility line removals have been finalized. MRB is awaiting specialized departments approval. It is expected that DOT, DOIT, DOC will have appraisal results for the basis to the direct bidding of a specialized bidder in October 2015. Priority goes to special bridges, ramp to depot of CP01 and station S8 of CP02 in October 2015. Scheduled progress by end 2015: Complete the construction of the lower structure (including boring pile, pedestals and shafts), pouring 10,750m³ of concrete of pile pedestals and 3,440m³ of pile shafts; completed 85% of pile cap and 70% of beams (192/274 beams).

CP03 – Tunnel and underground station:

Contract awarded. MRB issued Letter of Acceptance to Contractor on 22 October 2015.. Updated Resettlement Plan has been approved by ADB. Its implementation is ongoing.

CP04 – Technical Infrastructure at Depot:

The contractor has completed 90% volume of contract. On 22/1/2015, People's Committee of North Tu Liem District has implemented forced relocation of Depot and access line and handed over to the project. MRB has directed the contractor to implement fencing to avoid encroachment of the handed over site and implement waste clearance for land clearance. The works are expected to be completed by end 2015.

CP05 – Architectural Works at Depot:

includes of 21 items, of where 17 building complex with 13 buildings of foundation reinforcement concrete. Current progress is about 23%, including: building piles, permanent pile casting and permanent pile pressing.

CP06 – Design, supply and install 1st rail system:

Procurement is ongoing. Technical bid evaluation has been completed. The financial bid of the one lone responsive bidder is still under evaluation by MRB and the consultant. The bidder has submitted its last clarifications on September 17th but this information still remains insufficient according to the consultant. MRB will send Systra's final evaluation report to the bidder for comments and acceptance and then send the final report to HPC and the donor for no-objection. Contract award is expected by end of 2015.

CP07 – Design, supply and install 2nd rail system 2 (E&M):

Procurement is ongoing. Technical and financial bid evaluation has been completed. Contract negotiations with the successful bidder are ongoing. Contract award is expected by end of 2015.

CP08 – Design, supply and install the 3rd rail system:

On 11/11/2014, MRB issued the bidding document. On 13/1/2015, MRB opened Bids. On 27/4/2014, MRB opened the Financial bids and the financial bid evaluation is ongoing. Contract award is expected by end 2015.

CP09- ticket system:

The ticketing policy framework has been approved by HPC in September 2013. Systra has confirmed that the CP9 technical design was compliant with the new ticketing policy framework and wouldn't require any amendment. MRB is now waiting for the DoT validation of the package technical standards and the MoT expertise on technical design and cost estimate before releasing its final validation on the package technical design and cost estimate. Procurement of the package has not yet been launched and is significantly delayed from the original schedule.

IC2.1b2 - Project Implementation Consultant (PIC): Consulting services are fully mobilized and on track.

IC2.1b3 - Project Management Support consultant (PMS): Consulting services have been demobilized on 30 September 2015 due to contract completion. Individual consultants are being recruited by ADB to provide project management support until PMS –phase 2 consultant has been mobilized under the ADB's additional loan. PMS –phase 2 consultant is expected to be mobilized immediately after additional loan has been made effective, currently scheduled in May 2016.

Detailed information on the Project and Project progress is to be provided by MRB in documents to be included with the RFP.

1.3 MRB organization

15. The MRB organization is shown in diagram in Annex A together with a description of the main responsibilities of each functional unit.

MRB will employ counterparts to the experts provided by the Consultant.

1.4 Overview of the assignment**1.4.1 Background**

16. As noted in the introduction, this assignment resulted from the internal approval process MRB used for Metro Line 3. An initial assessment of the requirements for implementation support of metro construction project, capacity building of MRB and measures to ensure the promotions of public transport was made in August 2010 as reported in the Institutional Development Report.

1.4.2 Activities of Other Financiers relevant to this assignmentUrban Rail Projects in Ha Noi

17. The Ha Noi Pilot Light Metro Line is one of the urban rail lines in Ha Noi proposed as part of the Urban Mass Rapid Transit (UMRT) System for Ha Noi in the HAIDEP Study⁵⁰ completed in March 2007, where it is referred to as Urban Mass Transit Line 3 (UMRT3).

18. The HAIDEP recommendations form the basis for the Ha Noi 2020 Transport Master Plan which was approved by the Prime Minister in July 2010. Development work is now proceeding on four lines shown in **Figure 1**.

⁵⁰ *The Comprehensive Urban Development Programme in Hanoi Capital City in the Socialist Republic of Vietnam* Final Report March 2007 – ALMEC Corporation, Nippon Koei Co.Ltd., YACHIYO Engineering Co.Ltd. Japan International Cooperation Agency and Ha Noi People's Committee

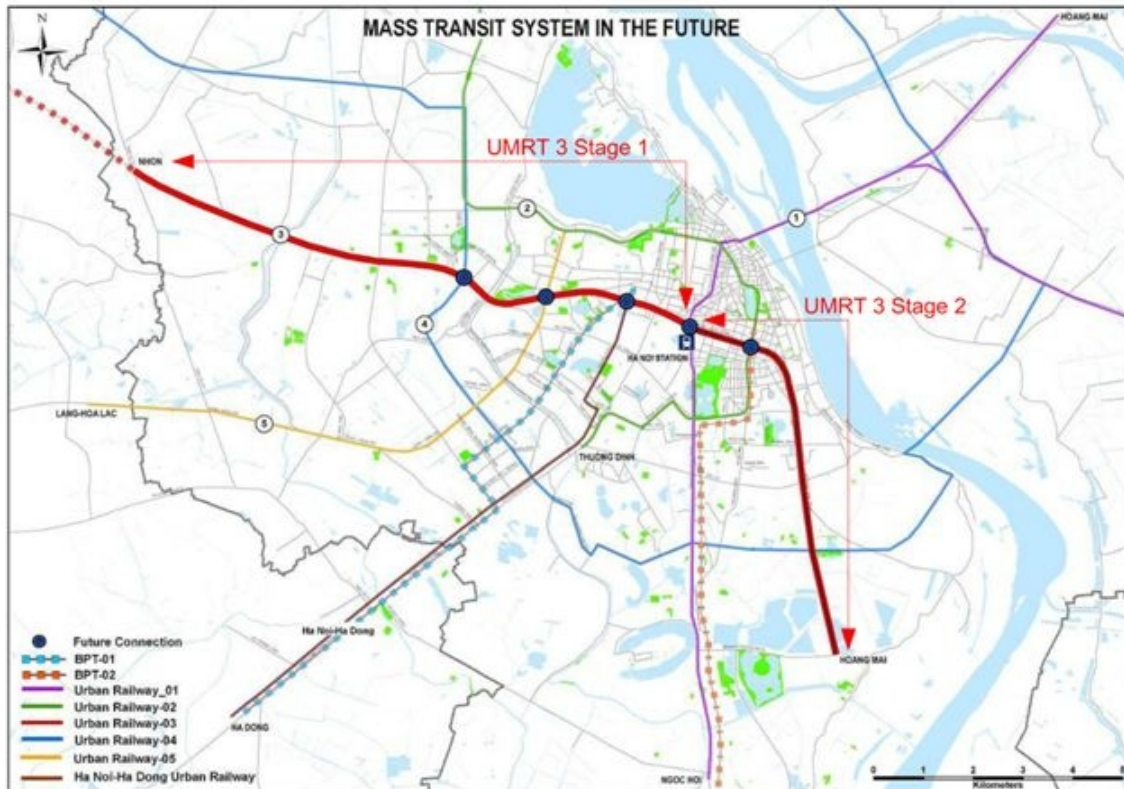


Figure 1: Proposed Development of Ha Noi Mass Transit network

19. The current status of implementation of the three other ongoing metro lines is as follows:

- (i) UMRT Line 1 (Ngoc Hoi to Yen Vien, Nhu Quynh) This 34.5 km long line runs mainly N-S through the centre of Ha Noi from Ngoc Hoi to Yen Vien on the existing Vietnam Railway Corporation main line. Although this is referred to as UMRT 1 in HAIDEP, the design parameters suggest that it should be considered as a suburban rail line rather than a metro. The Feasibility Study for the line, which includes creation of an elevated double track railway, was completed in August 2010, with Japan International Cooperation Agency (JICA) funding⁵¹. There is an interchange station with Line 3 at Ga Ha Noi. Studies for this line include proposals for Automatic Fare Collection (AFC). Up to now, the consultants basically have completed the technical design but Red river bridges and sections of north of the Red River are not agreed by HP'C Hanoi and Ministries for alignment. Hence, Viet Nam Railways Corporation should not approve by the full the technical design.
- (ii) UMRT Line 2 (Noi Bai to City Centre and Ha Dong) This 63 km line from Noi Bai Airport, around the northern edge of the urban core to Ha Dong is to be developed with JICA funding, with MRB designated as the Project Owner by HPC. The FS has been prepared. F/S report, basic design were approved . P/Q works for 04 construction packages were approved by JICA on 16/10/2013 and finalize the verification on technical design for elevated section and for Depot.
- (iii) UMRT Line 2A (Hao Lac to Kim Ma) This is a branch line of Line 2. It is being funded by the Government of the People's Republic of China (PRC) as a design and build contract. This is an elevated metro but is designated as a Light Rail Transit (LRT). The Vietnam Rail Administration (VNRA) of the Ministry of Transport (MoT) has been designed as the Project Owner. On completion the line

⁵¹ Services for Ha Noi Urban Railway Construction Project (Line 1) Phase 1

will be handed over to MRB for management, in accordance with the provisions of the Vietnam Railway Law. All lines with the total of 13,05km length, including 12 elevated stations, when putting in to operation that will have 13 trains with 4 cars. The train with a carrying capacity of 2,008 passengers, the maximum speed is 80km trains / h, It is expected to put into operation on 2015 .

Bus Rapid Transit (BRT)

20. In addition to these metro rail lines, the World Bank (WB) under the Ha Noi Urban Transport Development Project (HUTDP) is funding construction of Bus Rapid Transit (BRT) Line 1, from Kim Ma via Khuat Duy Tien to Ha Dong. There will be an interchange with UMRT 3 and LRT Line 2A at Cat Linh, just south of Kim Ma. This Project was appraised by Ministry of Construction and approved by HP'C with the length of 14,7 km from Kim Mã car park to Giảng Võ - Láng Hạ - Lê Văn Lương - Lê Trọng Tấn - Trần Phú - Ba La. It is expected the first BRT of Viet Nam generally and Hà Nội especially will start the operation from 2015 with frequency 3-5 minutes/ trip , each trip with 90 passengers with the speed of 20-22km/h.

Bus Services

21. The French Île-de-France Region and the HPC are working to complete a series of pilot projects that come under Ecotrans 2, the Ha Noi Public Transport Improvement Programme, and being implemented by TRAMOC. The funding includes TA to HPC provided by the Institut des Metiers de la Ville (IMV) for improvements to Public Transport facilities. The project consists of three main items of which item 3 of the project is to build an interchange station at Nhon and propose a multi-modal interchange station at the end of Nhon area of urban railway line 3 .

Studies of Metro Rail Stations

22. JICA completed in January 2011 a study⁵² examining the development potential around all UMRT 2 & 1 stations, with a number to be selected for more in depth design studies. As part of their TA support to the UMRT 3 Project, AFD has completed the concept design studies for two stations, - Ngoc Khanh and Cau Giay. AFD had completed the study on 02 stations detail design study at Ngọc Khánh và Cầu Giấy. Additionally, strengthening sustainable urban transport project for Hanoi Metro Line 3 funded by ADB, The purpose of the project is development of multimodal of public passenger transport system, environmental friendly, attractive to the passenger that shift from private vehicles to use public passenger transport service for reducing emissions of greenhouse gases and toxic emissions to the environment, developing a vision towards Hanoi Capital - urban ecological civilization and modern.

TRAMOC

23. GTZ is supporting two CIM experts who are providing advice to TRAMOC and TRANSERCO. Advice to TRAMOC is on (i) Project Management of International ODA Funds; (ii) Organizational Development and Capacity Building, and (iii) Social Research linked to Public Transport Surveys. The advice to TRANSERCO is on bus maintenance at Thuy Khue Depot.

24. Public **Transport Authority (PTA)**: WB under HUTDP has allocated funding for TA to support the strengthening of TRAMOC and the creation of a Ha Noi Public Transport Authority (PTA).

Operations and Maintenance entity for Metro lines

25. HPC has requested JICA to provide TA to assist in defining and establishing the overall O & M entity for all metro lines in Ha Noi.

⁵² The Project on Integrated UMRT and Urban Development for Ha Noi in Vietnam

Other Consultancies related to Metro Line 3

26. AFD is providing funding for;
- (i) IC 2.1b.2 - Independent Consultant 2.1b.2, for Verification of Tender Documents and Cost Estimates package 3, 6, 7, 8, 9 produced by PIC
 - (ii) IC 2.2 - Independent Consultant 2.2, for Verification and Certification of System Safety
27. The scope of work from the TOR of these consultancies is shown in **Annex E**. the contract of two packages have been signed and now under the period of services implementation.
28. AFD is also providing a grant of (€0.5 million) for an “MRB Capacity Strengthening Program” (PAI) with four components:
- (PAI-1) - Assistance in Strengthening MRB Capacity: development of cost management and human resource management systems
 - (PAI 2) - Assistance in establishing Operator: one O&M expert to be hired to provide support to MRB and the O&M Task Force for around one year
 - (PAI 3) - Assistance with Resettlement Issues
 - (PAI 4) - Assistance with Study Tours : Hong Kong, Singapore, Kuala Lumpur and Shanghai
29. FFEM is providing a grant of (€1.27 million) for Urban and Environmental Integration Capacity Strengthening Program” (PAIUE) with three components
- (PAIUE-1) Assistance with selection of Environmental Monitoring Equipment and Consultant
 - (PAIUE-2) Assistance with definition of two Transport Interchanges
 - (PAIUE-3) Assistance with definition of Project Public Communication issues
30. COTEBA (a French consultant) has been assigned to support the definition and the procurement of these consultancies under PAI and PAIUE. Procurement and implementation is in progress. The Scope of Work is shown in **Annex F**.

1.4.3 Matters affecting this assignment that are currently under discussion

Public Transport Authority (PTA)

31. HPC has indicated its intention to establish a PTA with overall responsibility for planning, design and management of public transport infrastructure and services in Ha Noi. As noted above, definition of the role and responsibilities of the PTA is being studied. Pending the results of this study, neither MRB nor any other agency has any responsibility for the matters listed below. However decisions on aspects of these matters affecting Line 3 cannot await the outcome of the PTA study. MRB will need advice on how to address them, in consultation with other agencies.

Operations and Maintenance Entity

32. MRB is currently responsible for the implementation and commissioning of Line 2 and Line 3. The importance and urgency of the request, to soon study the organizational models that can prepare, manage urban railway system right after built / installed. HP’C has established working group for developing scheme for projects operating units, exploitation and maintenance of urban railway line in Hanoi city (Scheme O & M). Scheme for establishment of operating agency, exploitation and maintenance of urban railway lines in Hanoi City that having been under process of completion. It is expected to be endorsed by people’s council in 2014. After the proposal is approved, a series the important tasks related to study and establish the institutional system for managing the operation, exploitation and

maintenance of the railway system in Hanoi city that will focus on the implementation.

33. As noted above JICA has also been asked by HPC to study this topic.

34. The PIC contract includes provision of advice on O&M for 1 year after start of operation and training in Operation and Maintenance for trainers. However the PIC contract does not include support for the establishment of the O & M Company. The delivery contracts (package 6) include maintenance of the rolling stock for the first 2 years.

Fare policy and AFC ticketing system

35. The delivery contract (package 9) includes an Automatic Fare Collection system (AFC) with gates, contact less card technology, tokens and ticket vending machines. The studies listed above for UMRT Lines 1 and 2 also include provision of AFC equipment. The only currently operational fare system is on the bus system. This is based on single ride tickets, monthly cards and special cards for students, and other groups. Ticket policy mechanism and the regulation on technical for ticket system of general urban railway in Hanoi has not been approved by authorities agencies, therefore, technical design of Cp09 is not yet approved also for Bid organization.

Measures to facilitate/increase the use of Line 3 - Station area design and modal integration

36. MRB's responsibility ends at the station entrance, as does the responsibility of the PIC. ADB and AFD have indicated that there is a need to examine the design of the areas around the stations to ensure optimal access for pedestrians, motorbikes, cars and buses, parking for motor cycles, as well as waiting areas for buses and motorcycles. ADB, AFD and JICA have also stressed the need for well designed interchanges between public transport modes (metro, bus, BRT). JICA has raised the importance of integration of urban development and metro stations.

37. To stimulate some consideration of this topic, the AFD funded PAIUE 2 study is examining how modal can best be organized using one underground (Daewoo) and one elevated station (Cau Giay) as case studies.

38. Under the ADB funded "Strengthening Sustainable Urban Transport for Ha Noi line 3 project", it is proposed to improve accessibility at stations, connectivity of public transport to metro stations and changes to policies and regulations to encourage private to public modal shift. The Project will perform under two phases, phase 1 is to study project ideas to assess and identify solutions for sustainable urban transport, phase 2: to study the feasibility for the construction and design the unified solution. On 31/5/2013 the consultant has completed the feasibility study report and the final design basis.

Commercial issues

39. There is a potential for the owner of UMRT3 for earning money by leasing advertisement spaces and sales stands/booths on the system. Until now this opportunity has not been investigated and the description of the necessary measures to maximize the potential earnings are not included in any of the consultancy contracts.

Metro Security Policy

40. The PIC has indicated that there has been no discussion to date on the way that passenger security (as opposed to rail system safety) is to be assured at stations. Such discussion should include numbers of staff at stations, and provisions in the station design for space for facilities for these staff, and provision of CCTV. The discussion should also include the provision of security staff on trains and the overall policing of the system. Such decisions affect all lines.

Safety management plan at the station

41. To date, the method how to ensure security for the station area that have been

calculated by PIC in the CP02's technical design report, based on passenger traffic, the area of the station area, releasing time that the passengers are occupied in platforms from the farthest point on the platforms to a safe location. However PIC has not yet to show how collaboration between safety management staff in the station and service equipment for safety management.

2 OBJECTIVES OF THE CONSULTING SERVICES FOR PROJECT IMPLEMENTATION SUPPORT AND CAPACITY DEVELOPMENT

42. The overall objective of the consulting services is to provide project implementation support to MRB in order to make sure that the Metro Line 3 is implemented to the required quality, on time and within budget, and when opened operates effectively and efficiently

To meet this overall objective, the consultants should;

- Undertake directly certain tasks, while progressively transferring responsibility to MRB staff
- Provide skills in specific technical disciplines (where these skills are not available in the local market), and knowledge transfer of these skills to MRB staff."
- Provide training (that is not provided by others) to give MRB staff the necessary skills
- Address the organisational, functional and technical capacity shortfalls within MRB
- Undertake the additional physical design, organizational and policy formulation required to ensure the line will operate effectively and efficiently

43. The technical assistance delivered by should also;

- Add to a positive cooperation between the stakeholders of the project, facilitate active prevention and settlement of issues, as well the mitigation of disagreements and disputes.
- warrant efficiency and stability, and use of appropriate and modern technology for Line 3, which provide convenience for users and be convenient in operation and maintenance;
- ensure the implementation and operation of Line 3 would be in accordance with Vietnamese legal regulations, environmental and social conditions, as well as financier requirements

44. The objective of the consulting services will be achieved over the full duration of the Project from 1 April 2012 to 30 June 2019.. From 1 April 2013 to 30 September 2015, another contract was implemented for similar services, for the Project Management Support – Phase 1 (PMS1) under a contract between IDOM (Spain) and MRB. The consulting services now to be recruited is considered a natural continuation to the ongoing services. The gap between the PMS –phase 1 and –phase 2 consulting services is proposed to be filled by individual consultants to be recruited by ADB.

OVERALL SCOPE OF WORK

2.1 Basic scope of the assignment

2.1.1 Components

This assignment has two components.

45. **Component 1: Implementation Support** – Activities to directly support the implementation of metro Line 3 by MRB. These activities include consultant services to undertake the key tasks of Project Planning and Contract Management and to support International Procurement, and provision of specialist engineering services currently lacking in Vietnam. Also includes activities to meet co-financiers specific requirements for implementation, monitoring and reporting on the progress of the project, and to assist MRB

in addressing the issues affecting the project that are still under discussion.

46. **Component 2: Training of MRB Staff and Capacity Building** – Training of MRB staff so as to be able to work more effectively with the implementation support consultants, and to take over some of the responsibilities. Also includes capacity building of MRB (through reorganization of departments, increase in staff and improvements in business processes) for the same purposes.

Details of the Scope of these Components are provided in the following sections.

2.2 General Measures

2.2.1 Familiarization

47. The Consultants shall in the very start up of his assignment make themselves well acquainted with the project, its stakeholders and activities of other Financiers relevant to this assignment

In doing this the Consultant shall

- Read all the plans of the project in their latest versions
- Establish a list and a library of the documentation so far issued in relation to the project
- Liaise with the various departments of MRB and the other consultants involved in the project
- Liaise with other financiers and their consultants, and Take any other measure which they deem necessary to get acquainted with the project.

2.2.2 No Overlap with other Financier Funded Consultant Services

48. As **noted** in Section 1, there are a number of other financier funded activities being undertaken for this project. It is of paramount importance to MRB and to ADB/AFD/EIB and DGTresor that there is no overlap of activities between the consultant services that are the subject of this TOR and any other consulting services for the Project. The TOR has been written with this requirement in mind. The Consultants should also keep this requirement in mind when developing their Work Plan.

49. It is particularly important to clearly identify where activities covered by this TOR
- follow on after a given date from a similar activity in another area of the consulting services.
 - are intended to provide an independent commentary of the proposals or views of the PIC or IC 2.1 and IC 2.2
 - are intended to provide advice on international standards and practice to supplement advice on Vietnamese standards and practices
 - are intended to supplement advice provided by others on international good practice that cannot be obtained in the local market

2.2.3 Work Plan

50. The Consultants shall within the first month of their assignment to the project update the Work Plan for this assignment that was submitted in their proposal. The Work Plan shall describe the Consultant's understanding of the project's situation and it shall justify the works and measures proposed in the Work Plan.

This plan shall be updated at least quarterly in the first year of his assignment then ½ yearly. The Work Plan shall among others describe to which extent the Consultant shall have contact to the stakeholders of the project.

The Work Plan shall be submitted to the funding agencies and approved by MRB.

2.2.4 Training

51. Classroom and on the job training of MRB staff is an integral part of this consultancy. Each international expert will be assigned a MRB counterpart who is responsible for the work area of the expert in MRB. (The counterparts will as a minimum have a bachelor degree in engineering or another relevant subject.)

Classroom Training The experts shall during the period spent at MRB provide classroom training in their field of expertise to staff of MRB. Long term staff will provide training that will enable their counterparts to progressively take over responsibility for the tasks. Short term staff will provide training to provide MRB staff with an understanding of the specialized field of knowledge of the expert. This training is one of the key tasks of Component 2. The organization and administration of the training programs will also be undertaken as part of Component 2 of this consulting services assignment.

On the job training All experts will also practice on the job training of their counterparts and in good faith let the counterparts have insight in all relevant documents and knowledge the expert possesses on the subject and include the counterparts in the creation of the documentation the expert produces during his work. The experts shall consider the on the job training of their counterpart as important as the advice being provided. The experts shall ensure that the counterparts fully understand the background for the advice and that their insight into the subject is maximized during the periods the experts work for MRB. This is an integral part of the work of the experts in Component 1.

Reports on Training At the conclusion of each expert's assignment in MRB in Component 1, the expert and their counterpart shall together submit a report on the achievements of the on the job training. The report shall be submitted to the manager of the counterpart and it shall be signed by both the expert and the counterpart.

2.2.5 Capacity Building

52. Capacity building of MRB is also an integral part of this consultancy. International experts are expected to provide suggestions on changes to organizational structures, reporting relationships or business processes which would lead to more effective and efficient delivery of the project and/or operation of MRB. These suggestions should be discussed with MRB. It will then be the responsibility of MRB to design and implement measures to put these suggestions into effect.

2.2.6 Vietnamese law and Regulations

53. The Consultant shall take care to apply Vietnamese laws, regulations and standards unless where it is specifically agreed that other (international) standards or codes are to be used. This will normally only be when no relevant Vietnamese standards or codes exist or when they are not complete so that it is advisable also to follow international standards and codes or when financier conditions require following of other policies or procedures.

54. The Consultant's experts shall help their counterparts to understand which relevant international standards and codes exists on the various subjects and their contents and explain the differences and advantages/disadvantages standards and codes so that MRB can assess whether the standards and codes proposed by PIC are the best and correct choice for UMRT3.

Where conflicts have arisen between local and international standards or codes the experts shall advise their counterparts of the consequences of following either of the standards or codes.

2.2.7 Start Date and Duration

55. The anticipated start of the assignment is 1st June 2016.

The total assignment is for 3 years 1 month, with the start dates and durations of each task given in the following sections.

3 COMPONENT 1 - IMPLEMENTATION SUPPORT

3.1 Background Rationale

56. UMRT3 is the first automated railway built in Vietnam and at the same time MRB is a newly established organization with no prior experience in managing complex infrastructure and technical systems works.

57. It is therefore recognized that MRB needs assistance in managing the implementation and commissioning of Line 3 effectively to an international standard as well as assistance in specific technical disciplines because these skills are not available in the local market.

3.2 Objectives

58. On an overall basis to assist MRB in managing and implementing the Project; and in developing, or enhancing existing systems and organizational structures that facilitate clear reporting lines, high levels of accountability and transparency, effective communication, and timely professional decision-making.

59. More specific objectives for this task are:

- To assist MRB in the planning and continuous follow up on progress of the project to provide the management with a clear and correct picture of the progress at any time. The planning shall include all relevant activities of the various stakeholders in the project.
- To assist MRB in the budgeting and cost control of the project to provide the management with a clear and correct picture of the accrued costs and the updated total estimated costs of the project at any time.
- To assist MRB with specialized technical knowledge during the procurement of the various contract packages and during evaluation of tender documents and tenders to ensure compliance with FIDIC and with the requirements of involved IFIs, as well as local Vietnamese regulations and to ensure open competition among the bidders on both technology and price.
- To assist MRB in managing the project's contracts to ensure the compliance with FIDIC especially in relation to payment disbursements and claims handling
- To provide engineering knowledge within specific technical areas to assist MRB technical staff in the correct professional evaluation of tender documents and tenders and in the assessment of any technical problems which during the project may call for decisions on the part of MRB.
- To ensure knowledge transfer to MRB in all the activities of the task. (This includes provision of relevant international norms and standards, FIDIC training courses and increase in proficiency in the English language.)
- To assist MRB in the correct understanding of international standards and where they may conflict with local standards or regulations to provide proposals for viable compromises and to assist MRB in explaining the international standards and the compromises to local approving authorities.
- To assist MRB in maintaining a comprehensive view of ongoing TA and projects in Ha Noi that may have consequences for UMRT 3 implementation
- Liaison with funding agencies; provide project progress reports to funding agencies

3.3 Main Tasks

- | | |
|----------|--|
| Task 1.1 | Project Planning and Reporting |
| Task 1.2 | Contract Management and Cost Control |
| Task 1.3 | Metro Operations and Management |
| Task 1.4 | Provision of Specialist Engineering Knowledge |
| Task 1.5 | Meeting financier requirements on Resettlement and Environment and |

60. Gender Action Plan

61. This assistance is to be achieved by providing the following technical experts to MRB,

- Long term experts to undertake Main Tasks 1.1 -1.3 in project planning, contract management and cost control, and to advise on the “operability” and “maintainability” of the designs and tenders. ,
- Short term experts providing specialized engineering knowledge for Task 1.4 who are assigned for specific periods in the project schedule where documents have to be approved, bids have to be evaluated or when technical decisions have to be made : CBTC signaling, tunneling, rolling stock, OCC/SCADA, RAMS, fire protection and evacuation, , and system safety,
- Short term experts for Task 1.4 who are assigned to MRB “as required” by MRB for short periods in order to assist in decision making on the matters listed in section 1.4.3 which affect UMRT3 that are still under discussion:
- Long and short term experts for Task 1.5 to assist MRB in meeting financier requirements in resettlement and environmental monitoring.

62. The detailed scope of work for each of the main tasks, and the experts required are described in the following sections

3.4 Project Planning and Reporting - Task 1.1

Background

63. For the project exist only overall planning in the form of a Tendering Plan and an overall project implementation plan. For detailed planning MRB has so far relied on the planning performed by PIC, which covers package 1-9, as well as an overall program prepared by PMS1. There is continued need for systematic planning of all other works as well as the approval flows for documents which also involve stakeholders outside MRB.

64. It is appreciated that this is a very complex task given the projects complexity and many different approving bodies, but it is necessary in order to provide the management of MRB with the information and overview to properly manage the project.

Objective

65. To continue assisting MRB in the planning and continuous follow up on the progress of the project, so as to provide the MRB management with a clear and correct picture of the progress at any time.

Project Planning

- The Consultant shall review, identify and describe all relevant work activities in the project including those of stakeholders outside MRB like approving authorities etc. and identify the units responsible for each task and the task’s duration. The Consultant can use the planning of PIC and PMS1 in this work.
- Based on this the Consultant shall further develop a time and activity schedule which shall cover all activities necessary for the completion of the project.
- The Consultant shall provide the necessary software planning tools and their licenses for this purpose. The planning tools shall be able to clearly identify the critical path(s) of the project. PIC use Primavera for construction planning.
- The time and activity schedule shall be collapsible and expandable in order to create the necessary overview of the project and of individual tasks.
- The Consultant shall be given access to all information in MRB and can approach any employee in MRB to have relevant information.
- The Consultant shall agree with MRB how information from stakeholders outside MRB can be obtained and to which degree the Consultant can approach them.

- The planning shall give a true and comprehensive picture of the UMRT3 project and its status.
- The Consultant shall assist MRB in the use of the Aligned Monitoring Tool (AMT) as requested by the Ministry of Planning and he shall to the extent possible deliver the necessary data input to the AMT.
- The experts shall assist MRB in its liaison with the financiers.
- The consultant shall with MRB prepare the Financial Management and Sustainability Action Plan (FMSAP), as well as collect data for preparing the projections for financial expenditure, travel demand and ridership forecasts, and projections for annual budgeting needs for operation of the Ha Noi Metro Line System.
- The consultant shall with MRB prepare the annual financially sustainable investment and operations plan for the Project and baseline for planning and monitoring of investment costs, operation and maintenance costs, passenger demand forecasts, cost recovery fare level, and fare and other revenues, and annual projected financial statements for the Project.

Progress reporting

66. One of the duties in this respect is to issue monthly progress reports for the project. From 3 months after the start of his assignment the Consultant shall start issuing monthly progress reports. The progress report shall comply with the requirements of the financiers.

The progress report shall among others include

- the updated activity time schedule
- it shall clearly identify all activities which have fallen behind the planned completion and state how much the delays are
- Delayed activities on the critical path
- The probable effect on project completion

67. The reporting shall give a true and complete picture of the progress of the works. The format used under PMS1 services can be adopted and modified as desired.

68. The reporting shall to the extent possible give verbal explanations to any delays, state who are responsible for the delays, if there are any penalties due because of the penalties, assess the possibilities of recovery and the possible effect on other activities and the project completion.

69. The report shall be distributed to the management of MRB, PMU1, Land Preparation Department and the Planning Department and to project financiers. Further distribution shall be agreed with MRB.

70. The Consultant shall actively collect information on the progress of the works, however the experts shall not be liable for the progress of the works nor shall they work on advancing the works.

71. The Consultant shall assist MRB in producing the progress and costs reports to the financiers as required by the Finance Contracts and Loan Agreements. These reports shall be based on the data in the monthly reports produced by the Consultant.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
(international) Position: Team Leader/ Project	At least a Master's degree in a relevant discipline, and an internationally recognized	At least 20 years of work experience of which 10 years shall have been within project planning and at least 5 years in

Planning Expert	professional accreditation	a Team Leader position for a similar size assignment. The expert shall have experience in working abroad. Have Experience in developing countries is desirable. Experience on similar assignments on ODA funded projects is also desirable.
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Inputs

The experts shall take up the positions within a month after the signing of the consultancy contract. Duration of the assignment is 33 months.

Location

The Team Leader/ Project Planning Expert shall work in the Consultant's established office in Ha Noi and report directly to the Director PMU1.

Deliverables

- i) Responsible for overall project deliveries of the PMS services
- ii) Establishment of Project Scheduling System
- iii) Monthly project progress reports

The Team Leader/ Project Planning Expert will take a lead role in preparing the FMSAP with PMU 1 and MRB staff.

Counterpart Staff

MRB will provide full time a staff member to work with (and under the direction of) the Team Leader/ Project Planning Expert to assist in the day to day work of the expert, including in obtaining the necessary information for the planning from the departments of MRB and from the approving authorities or other stakeholders, and in preparing reports. The required qualifications and experience of the MRB counterpart staff members are shown below.

MRB Counterpart	Academic Qualifications	Experience
Project Planning Officer	At least a Bachelor's degree in a relevant engineering discipline	At least 10 years of work experience of which 3 years shall have been within project planning. Desirable to have <ol style="list-style-type: none"> a) at least 3 years of experience in a similar position on a project(s) of similar size b) Experience on similar assignments on ODA funded projects

3.5 Contract Management and Cost Control - Task 1.2

Background

Existing accounting system is applied by MRB based on the laws and regulations of Vietnam. Report on monthly costs of consultancy support project management phase 1 meets the wishes partly of MRB however the conclusion on the report still lacks of analysis of causes, consequences and also recommendations in order for employer's enable for solving pending issues when implementing the project.

Objectives

To assist MRB in:

- (i) the budgeting and cost control of the project, and

- (ii) managing the project's contracts to ensure the compliance with FIDIC especially in relation to payment disbursements and claims handling so as to provide MRB management with a clear and correct picture of the accrued costs and the updated total estimated costs of the project at any time

Cost Control

The Consultant shall utilize the system established under PMS1, to provide state of the art cost management software and make the necessary configurations/changes of the software for the project.

The software shall when implemented enable a complete and true overview of the economy of the UMRT3 project at any given time.

The software shall as a minimum be capable of reporting on each budget line in the budget for the UMRT3 project for any given period

- the costs incurred in the period
- the accrued cost at end of the period (from project start)
- the estimated accrued spending at the end of the period (based on the original or revised budget)
- the estimated total project costs (based on rules agreed with MRB)
- the revised (approved) total project budget if any
- the original total project budget

The system shall be able to present both detailed budget lines as well as only major budget lines (collapsible/expandable).

The reporting shall be available in local currency (Dong) and in both Euro and USD.

The Consultant shall propose and implement any further functionality that he finds is necessary for fulfilling the overall target.

The Consultant shall review the current budget structure of UMRT3 and propose and agree with MRB any additions or alterations with may be necessary for the proper functioning of the cost management system.

It shall be possible to transfer the cost data electronically from the present MRB accounting system which is based on an access data base, to the extent these data exists.

The Consultant shall review the existing accounting system in MRB and propose and agree with MRB any additions or alterations with may be necessary for the proper functioning of the cost management system.

The software shall be completed within 3 months of the start of the Consultants assignment. The software shall be implemented in close corporation with the Finance & Accounting department.

When the system is implemented it shall be operated by the Financial & Accounting department with the assistance of the Consultant.

Contract management

The Consultant shall set up a contract management system including procedures which fulfill the requirements of the contract in terms of contract meetings, site meetings, minutes of meetings, correspondence, payment disbursements, penalties due, claimed or paid/deducted, claims handling and any other relevant procedures which will ensure that the contracts are managed properly and that the MRB management always have a full overview of any open issues.

The Consultant shall do this in cooperation with whoever in the PIC who is responsible for the contract management of contracts for packages CP 01 to CP 09.

The consultant shall prepare the draft FMSAP together with MRB and PMU1 and ensure its readiness for submission to ADB and the other cofinanciers within 4 months of the consultant's mobilization. The FMSAP shall include clear actions to mitigate project risks relating to (a) poor financial management systems; (b) auditing systems delay; (c) institutional capacity constraints; (d) cost escalation; (e) funds flow coordination issues; and (f) financial sustainability issues.

Progress reporting

The Consultant shall with the assistance of the Financial & Accounting department issue monthly cost reports as specified above starting at the end of the 4th month after start of the consultancy.

The Consultant shall every quarter starting 6 months after the start of the consultancy issue a status report on contract management including among others status on payments, status on penalties, issues of disagreements with the contractors, all claims notified by the contractors and their status.

The Consultant shall assist MRB in producing the progress and costs reports to the financiers as required by the Finance Contracts and Loan Agreements. These reports shall be based on the data in the monthly reports produced by the Consultant.

Consultant's Staff and Qualifications

Consultant	Academic Qualifications	Experience
Contract Management and Cost Control Expert (international)	At least a Bachelor's Degree in a relevant discipline, and an internationally recognized professional accreditation	At least 15 years of work experience of which 10 years shall have been within project planning, cost control and contract management. The expert shall have held at least the same position on a project of similar size at least once before. The expert shall have experience in working abroad. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

The expert shall take up the positions within a month after the signing of the consultancy contract. Duration of the assignment is 33 months.

Location

The International Expert shall work in the Consultant's established office in Ha Noi and report directly to the Director PMU1. The expert shall coordinate closely with MRB's Financial & Accounting department and report to the head of the Financial & Accounting

department but also liaise closely with the director of PMU1 in relation to contract management issues.

Deliverables

- (i) Establishment of project cost control system
- (ii) Establishment of project contract management system
- (iii) Monthly Cost Reports
- (iv) Monthly Contract Management Status Report
- (v) The consultant shall prepare the draft FMSAP together with MRB and PMU1 and ensure its readiness for submission to ADB and the other cofinanciers within 4 months of the consultant's mobilization.

Counterpart Staff

MRB will provide full time a staff member to work with (and under the direction of) the Contract Management and Cost Control Expert to assist in the day to day work of the expert, including in obtaining the necessary information from the departments of MRB and from the approving authorities or other stakeholders, and in preparing reports. The required qualifications and experience of the MRB counterpart staff member are shown below.

MRB Counterpart	Academic Qualifications	Experience
Contract Management Officer	At least a Bachelor's degree in a relevant engineering discipline	At least 10 years of work experience of which 3 years shall have been within contract management Desirable to have c) at least 3 years of experience in a similar position on a project(s) of similar size a) Experience on similar assignments on ODA funded projects

3.6 Metro Operations - Task 1.3

Objective

The consultant will ensure that the UMRT Line 3 is designed and built in such way that it can be operated and maintained in an effective and efficient way, and that once commissioned it is maintained to the appropriate standards, and that adequate funding is budgeted to ensure that appropriate levels of maintenance are undertaken.

Assignment

The primary focus of this assignment is to provide advice on operability and maintainability during design and implementation, particularly in relation to Packages CP 2, 3, 6, 7, 8 & 9. The Metro Operations expert shall assist PID1

- i) in assessing the operability and maintainability of the design made by PIC and
- ii) in assessing the operability and maintainability of the solution proposed by the tenderers and
- iii) provide ad hoc assistance in the course of the project implementation should the need arise.

The Metro Operations expert shall also assist MRB in defining the vision of the metro – what are the overall 10 most crucial features of the system and to break this vision further down into strategies and main requirements.

The Metro Operations expert shall in the rest of his assignment have focus on how well the chosen design and solutions fulfill the vision.

The Metro Operations expert shall together with PIC (based on the proposed design) describe the normal operation scenarios as they will be perceived by passengers and by the operators.

The Metro Operations expert shall explain and discuss the scenarios with MRB to ensure that MRB agrees that they will fulfill his vision of how the metro shall work.

The Metro Operations expert shall also review and comment on all issues which directly relates to the effectiveness of operation (including fall back operations) such as but not limited to alignment, track layout, dwell time efficiency, train layout, passenger flows in and out of trains, passenger flows on stations, station layouts etc.

The Metro Operations expert shall advise MRB of the possibilities of using modern dynamic passenger information systems and in the proper application of both dynamic and static signs in the metro.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
Metro Operations Expert (international)	At least a Bachelor's Degree in a relevant discipline, and an internationally recognized professional accreditation	Minimum of 20 years work experience of which 10 years shall have been within operations and maintenance in metro or suburban rail systems. Have participated in the design of a metro as an O&M expert. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Metro Operations Expert - Overall duration of 10 months, which may be intermittent. The expert will provide inputs at specific times including design review, tender evaluation, acceptance testing of trains, CBTC signaling, OCC and SCADA, AFC system and discussions on fire evacuation and safety management.

Location

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1.

Deliverables

The expert shall prepare reports indicating

- i) Designs or solutions which may hamper the intended use and maintenance of the UMRT3 and their consequences for the future operation and maintenance of the UMRT3 (e.g. the consequences of not having a test track in the Depot).
 - ii) Designs and solutions which may be considered as not normal according to international standards for operation and maintenance of metros.
 - iii) The normal operation modes and the most common fall back modes as seen from both a passenger and operator point of view.
- Reports shall be issued (a) at the end of the design review, (b) at the end of the tender evaluation, and (c) at the end of acceptance testing.

3.7 Provision of Specialist Engineering Knowledge – Task 1.4

3.7.1 Background

PIC is responsible for the technical design of the UMRT3, the Independent Consultant 2.1 is responsible for checking the design and the Independent Consultant 2.2 is responsible for Safety Certification of UMRT3.

However, MRB needs to have a general understanding of the technologies used or solutions proposed, to be able to discuss the design solutions proposed by PIC and the tenderers and to understand and assess the reports written by PIC and the Independent Consultants.

In addition to the effects on operation and maintenance of various designs, MRB needs to understand the interface between systems, the possible future obsolescence of the technology, risk and safety aspects and reliability of the solutions.

They shall understand the area well enough to have qualified discussions with the consultants and contractors and to explain their findings and possible problematic issues to the management of MRB.

They shall also be able to follow the supervision and acceptance tests performed by PIC and the contractors and understand and discuss the reports issued on these subjects.

3.7.2 Objectives

For all traditional technologies like construction works MRB possess this knowledge or can acquire it in the local market. However for some metro specific technologies MRB needs to be provided with specialized engineering knowledge which they do not have and which is not currently available in the local labor market.

To provide engineering knowledge within specific technical areas to assist MRB technical staff in the correct professional evaluation of tender documents and tenders and in the assessment of any technical problems which during the project may call for decisions on the part of MRB.

3.7.3 Proposed Experts

This technical assistance is given in the form of Short Term Expert assistance. The following is a list of the fields in which experts are considered necessary;

- Communications Based Train Control (CBTC) Signaling
- Tunnel Boring Machine (TBM) Tunneling
- Rolling Stock
- Operations Control Centre/System Control and Data Acquisition (OCC/SCADA)
- Reliability, Availability, Maintainability System (RAMS)
- Fire Protection
- Safety Management

The experts shall in their assistance and assessment especially focus on weak points in design or solutions where single failures can lead to stop of operations or unsafe situations and for points where the standards or codes have not been met.

The experts shall specifically guide MRB in the choice of norms and standards.

Further details regarding the technical features of the system can be found in the Feasibility Study Appendix B. The tenderers shall make them self-acquainted with these to ensure their proposed experts have the best qualifications for the task.

The Consultants may suggest, after reading the FS and familiarizing themselves with the Project, other expertise which they feel may be required.

3.7.4 Deliverables

The experts shall at the end of each of their missions (each visit to UMRT3) submit a report on their findings and assessments to MRB and the Financiers.

These reports shall as a minimum provide the Consultant's (and his counterpart's) assessment of the design by the PIC, the tenders by the contractors, the detailed designs of the contractors the actual constructions by the contractors or the acceptance tests by the

contractors as the case may be. The report shall be prepared in corporation with the counterpart assigned to the expert and co-signed by the counterpart.

The experts shall provide input as necessary for their respective work areas to the work reports and to the progress reports.

The experts shall at the end of their assignment submit the report on capacity building and training as mentioned in section 3.2.4.

Further requirements to the reports are given in the following sections.

3.7.5 CBTC signaling system – Task 1.4.1

Background

The Signaling and Control System includes trackside and onboard equipment with dedicated software to provide all functions for the Automatic Train Control sub-system comprising the Automatic Train Protection (ATP) function + Automatic Train operation (ATO) function), Interlocking sub-system (IXL), and Automatic Train Supervision (ATS) sub-system. The system does not provide for driverless operation.

It is considered that this is the system most likely to give rise to technical problems, especially in the first years of operation of the metro. Problems with this system mean delays to trains or even that trains do not move, which results in leaders becoming aware of the problem and pressure from them to solve it. Correction of problems in this subsystem is complicated because it also involves the safety system, which needs a special approval from the Independent Safety Assessor and the safety authorities.

Assignment

The CBTC signaling expert shall assist PID1 in assessing the signaling system design made by PIC and of the solution proposed by the tenderers and provide ad hoc assistance in the course of the project implementation should the need arise.

The expert's assignment shall cover all parts of the signaling system also parts which are not directly related to the CBTC system.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
CBTC Systems Expert (international)	At least a Bachelor's Degree in a relevant engineering discipline, and an internationally recognized professional accreditation	At least 20 years of work experience of which 10 years shall have been within signaling systems. . The expert shall have participated in the design of railway as a CBTC expert. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 5 person months, tentatively distributed as follows:

- (i) Implementation and Acceptance Testing – 5 months

Timing of inputs would be subject to agreement with MRB in advance.

Location

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart.

Deliverables

See section 4.7.4, no further specific requirements.

3.7.6 Tunnel Boring Machine (TBM) Tunneling – Task 1.4.2Background

The tunnel section will be bored using tunnel boring machine (TBM) technology.

The general soil conditions are 1m to 6 m backfill, clayey and silty layers until 10m to 25 m depth, under this you find sandy layers until 30m to 45m depth. Underlying this is gravel layers.

Secondary ground water level is found in the backfill and clay/silt layers, whereas the primary ground water level seems to be between -10m to -15m and constantly and directly recharged from the Red River.

Due to the soil condition of Ha Noi, the active ground water level, the closeness to the surface, the alignment of the tunnels (varying between on top of each other to beside each other), MRB should have independent experts who can advise them on the risks in terms of tunneling machinery (each type has its own virtues and problems) and in terms of unforeseen ground conditions. The risk is related to the works, but certainly also to the buildings above the tunnels. Practically MRB may be confronted with the question of whether to stop tunneling to keep going. In such a situation, MRB needs an independent advisor.

Assignment

The TBM tunneling expert shall assist PID1 in assessing the tunnel boring method proposed by the Contractors and he shall provide assistance during the construction phase by assessing the actual levels of risks and safety as the works progresses.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
TBM tunneling Expert (international)	At least a Bachelor's Degree in a geotechnics, and an internationally recognized professional accreditation	At least 20 years of work experience of which 10 years shall have been with TBM systems. . The expert shall have had hands on experience as responsible engineer for tunnel boring works in weak and sandy soils and with ground water pressure. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 8 person months, tentatively distributed as follows:

- (i) Tunnel Construction – 8 person months

Timing of inputs would be subject to agreement with MRB in advance.

Location

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart.

Deliverables

See section 4.7.4. The Expert shall produce reports as and when the actual work situation warrants that MRB is notified of risky or unsound conditions in relation to the tunneling works.

3.7.7 Rolling stock – Task 1.4.3

Background

The rolling stock has the following characteristics;

- or 5 car train,
- Car dimensions L=19,7-20 m, H= 3,9 m, W=2,75-3 m, inside H=2,1 m
- Maximum axle load 8 persons/m²: 15 tons;
- Standard track gauge (1435 mm);
- Bogies of two axle bolster less type, spacing 11-13m
- 4 exterior sliding doors (each side) per car, 1300 to 1400 mm width.
- 750 V traction power from third rail
- 3-phase AC asynchronous motor drive system
- Electro pneumatic and electro dynamic breaking system
- Air-conditioning
- Driving cab

The most important reason for MRB having an expert in this field is that the Rolling Stock combines many subsystems (listed above) and so is a complicated area. Specifically MRB (as customer) needs to have a person in their supervision team at the time of the rolling stock acceptance test who can advise whether to accept the trains or not. (If the total system does not perform as required it is either because of the ATC, the subsystems on the rolling stock or how well they perform together).

Assignment

The rolling stock expert shall assist PID1 in assessing the rolling stock design made by PIC and of the solution proposed by the tenderers and provide ad hoc assistance in the course of the project implementation should the need arise. Specifically the rolling stock expert shall assist MRB in the acceptance testing of the rolling stock.

The expert's assignment shall cover all parts of the rolling stock including but not limited to:

- Design and layout
- Car body
- Bogies
- Traction system
- Brakes
- Doors
- Auxiliary systems
- Control systems
- Fire loads and fire safety
- Driver cabin
- Radio communication
- Service vehicles (yellow fleet)

Consultants Staff and Qualifications

Consultant	Academic Qualifications	Experience
Rolling Stock Expert (international)	At least a Bachelor's Degree in a an appropriate engineering discipline and an internationally recognized professional accreditation	At least 20 years of work experience of which 10 years shall have been with a rolling stock design or supervision for a metro. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 7 person months, tentatively distributed as follows:

- (i) Implementation – 3 person months
- (ii) Acceptance Testing – 4 person months

Timing of inputs would be subject to agreement with MRB in advance.

Position

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart..

Deliverables

See section 4.7.4, no further specific requirements.

3.7.8 Operating Control Centre (OCC)/SCADA Systems – Task 1.4.4

Background

The UMRT3 will be equipped with 3 SCADA (System control and data acquisition) systems;

- (i) a building management system for the Depot,
- (ii) a building management system for the stations,
- (iii) SCADA system for the for the technical systems;
 - Signaling system equipment,
 - Traction power system,
 - Power distribution system,
 - Electro-mechanical (E&M) systems including station, tunnel and depot facilities, (including. A/C, ventilation, lifts, and escalators)

The Operating Control Centre (OCC) shall provide the following functions or subsystems:

- (i) Automatic Train Supervision,
- (ii) Supervision and control of Electrical Power,
- (iii) Supervision and Control of all Electromechanical subsystems,
- (iv) Management and Interface with Communication subsystems:
 - Public Address (PA) system;
 - Passenger Information System (PIS);
 - Telephone / Interphone;
 - CCTV
 - Access Control;
 - Clock
- (v) Operation management Functions,
- (vi) Maintenance Management Functions

These are very complicated systems, which if not made correctly can make the metro operational work in the control room very cumbersome, and such problems are hard to fix.

Assignment

The expert shall among others evaluate to which extent the systems are suitable for handling the expected amounts of data, systematic in their hierarchies, user friendly, automated to a reasonable extent and without unnecessary steps (mouse clicks) in the workflows.

Specifically the expert shall assess if the configuration ability of the alarms management system is at an acceptable level and if the alarm management system provides guidance to the operator in addition to the bare alarm codes.

Special attention shall be given to the implementation of the control of the tunnel ventilation system in relation to the chosen evacuation strategy.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
OCC/SCADA systems Expert (international)	At least a Bachelor's Degree in a an appropriate engineering discipline and an internationally recognized professional accreditation	At least 15 years of work experience of which 10 years shall have been within design and practical use of OCC/SCADA systems for metros or similar applications. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 5 person months, tentatively distributed as follows:

- (i) Implementation – 3 person month
- (ii) Acceptance Testing – 2 person months

Timing of inputs would be subject to agreement with MRB in advance.

Position

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart..

Deliverables

See section 4.7.4, no further specific requirements.

3.7.9 Reliability, Availability, Maintainability Systems (RAMS) – Task 1.4.5

Background

The overall functional performance requirements for the technical packages will be based on RAM requirements to the systems output.

Assignment

The Consultant shall among others assist MRB in understanding and assessing the RAM methodology proposed for the project, hereunder the suitability of the apportionment of RAM contributions to the various subsystems, the mathematical/statistical correctness of the calculation model and the adherence to the norms chosen.

The Consultant shall assist MRB in assessing the actual RAM calculations presented by the contractors during the various design phases and in the acceptance phase.

Consultant Staff and Qualifications

Consultant	Academic Qualifications	Experience
RAMS Expert (international)	At least a Bachelor's Degree in a an appropriate engineering discipline, mathematics or statistics and an internationally recognized professional accreditation	At least 10 years of work experience of which 5 years shall have been within RAM analysis/calculations of similar systems. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total xx person months, tentatively distributed as follows:

- (i) Implementation – 4 person months

Timing of inputs would be subject to agreement with MRB in advance.

Position

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart..

Deliverables

See section 4.7.4, no further specific requirements.

3.7.10 Fire protection and evacuation – Task 1.4.6

Background

The evacuation strategies and fire protection requirements will be based on NFPA 130.

The underground section is designed as twin tube bored tunnels with emergency walkways and max 750 m between escape exits. A fire detection system, a tunnel ventilation system and fire hydrants are foreseen.

This is a high risk area where decisions made during design and implementation may cost many lives in the future. Tunnel fires are not to be taken lightly.

Assignment

The expert shall assist MRB in assessing the fire protection measures and the evacuation strategies designed by PIC and the actual solutions proposed by the tenderers and provide ad hoc assistance in the course of the project implementation should the need arise.

The expert shall especially focus on the underground section where the suitability of the evacuation strategies combined with tunnel ventilation, fire hydrant system, evacuation sign system, emergency lighting and other fire protection means shall be assessed. The application and control of these and their application in the Scada system shall be assessed together with the Scada system expert.

Consultants Staff and Qualifications

Consultant	Academic Qualifications	Experience
Fire Protection and Evacuation Expert (international)	At least a Bachelor's Degree in a an appropriate engineering discipline and an internationally recognized professional accreditation	At least 20 years of work experience of which 10 years shall have been within design of fire protection systems including ventilation systems in tunnels. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 3 person months, tentatively distributed as follows:

- Implementation – 3 person months

Timing of inputs would be subject to agreement with MRB in advance.

Position

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or the technical department. The expert shall refer to the head of the department of the counterpart..

Deliverables

See section 4.7.4, no further specific requirements.

3.7.11 Safety Management – Task 1.4.7Background

The UMRT3 shall be safety certified according to international standards. MRB is in the process of employing an Independent Safety Assessor, the Independent Consultant TA2.2.

There is currently no National Safety Authority in Vietnam and it is at this time unclear which authority shall provide the final certification of the UMRT3.

The financiers consider it essential that MRB has in their organization somebody who is responsible for the very complicated process leading to a safety approval. MRB needs to lead this process. Given that the Safety Authority is still to be nominated, it may be argued that MRB will be held liable for future accidents. MRB cannot rely solely on the PIC or IC 2.2

Assignment

The Consultant shall assist MRB in providing the necessary framework within MRB to control the safety approval process. This will include setting up the necessary MRB internal control systems and safety documents (like the Safety Plan, the Safety Cases and Safety Requirements, Hazard log etc.) and controlling that PIC and TA2.2 acts within their stipulated scope of work.

Consultants Staff and Qualifications

Consultant	Academic Qualifications	Experience
Safety Management Expert (international)	At least a Bachelor's Degree in a an appropriate engineering discipline, mathematics or statistics and an internationally recognized professional accreditation	At least 10 years of work experience. The expert shall have at least 10 years of experience and he shall have been part of the safety management of a similar project. Experience in developing countries is desirable. Experience on a similar assignment on a financier funded is also desirable.

Inputs

Total 5 person months, tentatively distributed as follows:

- Implementation – 5 person months

Timing of inputs would be subject to agreement with MRB in advance.

Position

The international expert shall work in the Consultant's established office in Ha Noi and report to the head of PMU1. The expert's counterpart staff shall be provided either from PMU1 or

the technical department. The expert shall refer to the head of the department of the counterpart..

Deliverables

The Consultant shall document the agreed safety approval process and model and he shall ensure that the necessary safety plans, safety cases and hazard log are setup and approved by MRB management in a timely manner. See also requirements in section 4.7.4.

3.8 Provision of support to assist MRB to meet financier requirements – Task 1.5

3.8.1 Background Rationale

ADB has included certain requirements on MRB in their loan document and the Project Administration Manual, in addition to requirements related to project implementation discussed in Section 1 of this TOR. These requirements concern:

- (i) Resettlement Monitoring
- (ii) Environmental Monitoring
- (iii) Gender Action Plan Implementation, Monitoring and Reporting
- (iv) Project Performance Monitoring
- (v) Financial Management
- (vi) Procurement

MRB has limited skills in most of these fields. Training is to be provided in Component 2 to expand skills of MRB staff in the areas of Gender Action Plan, Project Performance Monitoring, financial management and procurement. (Assessments undertaken during project preparation indicate that the skills in financial management and procurement require some strengthening to meet ADB requirements.) However direct support is required for resettlement and environmental monitoring.

3.8.2 Objective

To ensure MRB has the resources to meet the requirements of financiers in these fields - provision of direct consultant technical assistance to assist MRB to fulfill specific financier requirements in relation to resettlement and environmental monitoring.

3.8.3 Resettlement Monitoring – Task 1.5.1

Background

MRB-PMU1 coordinates all land acquisition and resettlement activities while its Land Preparation Department conducts internal resettlement monitoring. The actual activities of resettlement are undertaken by District Resettlement Committees. Resettlement is implemented in accordance with an approved Resettlement Plan (RP) following Vietnam's applicable laws and regulations and ADB Safeguard Policy Statement (SPS, 2009). Resettlement Plans required for the Project have been prepared under Phase 1 for the TA and are expected to have been substantially completed before the start of Phase II, except for livelihood restoration activities which may require a longer period to implement. For Phase II, MRB needs support in (a) supervising/monitoring implementation of the livelihood restoration activities for severely affected and vulnerable APs, (b) monitoring and addressing emerging land acquisition/resettlement impacts during construction, (c) conducting post-RP evaluation, (d) maintaining a grievance redress mechanism (GRM) for the project, and (e) ensuring contractors compliance with requirements of the RP. In addition ADB requires independent monitoring of the outcomes of resettlement to ensure that resettlement has been completed satisfactorily and that people's livelihoods have been restored. An Independent Resettlement Monitoring Expert (IRM), acceptable to ADB is to be engaged to monitor pending/emerging land acquisition/resettlement issues and activities (including livelihood restoration). The IRM should not be engaged or involved in the project resettlement activities.

In addition ADB requires independent monitoring of the outcomes of resettlement to ensure that resettlement has been completed satisfactorily and that people's livelihoods have been restored. The PAM includes a specific requirement that the RP will be updated following completion of the Detailed Designs and submitted to ADB for review and concurrence. Within one month of the commencement of RP updating, an External Monitoring Agency (EMA), acceptable to ADB is to be engaged to monitor and evaluate updating and implementation of the RP. The EMA will engage a national Independent Resettlement Auditing Expert, who should not be otherwise engaged or involved in the project resettlement activities.

Main Tasks – Resettlement Coordination and Management Support

1. Review the status of land acquisition/resettlement activities (including livelihood restoration), including emerging issues, and ensure timely submission of internal resettlement monitoring reports
2. Assist MRB in preparing and implementing supplemental RP in case of additional impacts during construction
3. Maintain a database of APs with information on affected assets, involvement/enrollment in livelihood restoration activities, livelihood status and other internal monitoring indicators as provided in the approved RPs.
4. Support MRB in addressing grievance related to land acquisition/resettlement by (a) receiving/tracking/following-up, (b) alerting MRB and donors on grievances received, (c) providing advice for resolving such grievance, and (d) maintaining a grievance database
5. Advise and assist MRB in the conduct of regular consultations/discussions/information dissemination to APs

Main Tasks – Independent Resettlement Monitoring (External)

1. Evaluate baseline data that was collected under the phase 1 TA to assess changes in: household income and expenditures, expenditure composition patterns, primary and secondary occupations, borrowing amounts and debts patterns, materials conditions and possessions of consumer items, land area and tenure arrangements, school attendance of children, child malnutrition and general health, and distances to public services and infrastructure.
2. Collect qualitative indicators on the DPs' own assessment of changes in living standards before and after the project at households and community levels, which may be collected through open-ended questions, semi-structured interviews, case-studies, or group discussions
3. Verify with the DPs that community services and resources damaged during construction works have been fully restored to their previous conditions and operational capacity.

Consultants Staff and Qualifications

- (i) Resettlement Specialist (national) – undertakes all tasks on resettlement coordination and management.
- (ii) Independent Resettlement Monitoring Expert (international) – undertakes the external monitoring

Consultant	Academic Qualifications	Experience
Independent Resettlement Monitoring Expert (international)	Master's degree in a relevant discipline	Minimum of 10 years work experience in the design, implementation, and monitoring of resettlement, of which a minimum of 5 years should have been in similar assignments in developing countries. Experience in Vietnam is desirable
Resettlement Specialist (national)	At least a Bachelors degree in a relevant discipline	Experience of having undertaken at least one similar assignment

Inputs

- Resettlement Specialist – Continuous inputs from consultant team's mobilization until completion of resettlement and livelihood restoration activities expected to be completed within 12 months.
- Independent Resettlement Monitoring Expert - Input of 3 monitoring missions undertaken every 6 months, expect 3 months total input.

Location

The national Resettlement Specialist shall be based in the Consultant's established office in Ha Noi and report to the head of the department. The International Independent Resettlement Monitoring Expert will be based outside MRB and will not report to the head of the department, but will be given access to all relevant resettlement related documents.

Deliverables

- Monthly progress reports by the Resettlement Specialist with the first report one month after the start of the contract
- Resettlement Monitoring Reports by the Independent Resettlement Auditing Expert - every 6 months, starting 6 months after the start of the contract. Reports shall be submitted simultaneously to MRB and ADB

3.8.4 Environmental Monitoring – Task 1.5.2

Background

MRB currently has no Department which is responsible for environmental Management of works or environmental monitoring of outcomes.

An Environmental Impact Statement (EIA) and an Environmental Management Plan (EMP) have been prepared for the project. The requirements of the EMP, which contractors have to meet, are written into the contract. The PIC will ensure as part of its activities in Construction Supervision that contractors fulfill these contractual obligations. As part of their monthly progress reporting to MRB, the PIC will include reporting on compliance with the EMP.

MRB is in the process of procuring two environmental monitoring stations to be placed at fixed positions along the alignment. These will be used to measure the ambient air pollution and noise levels during and after construction. This equipment is being funded by FFEM under TA PAUE Component 1.

On 27/6/2014, the contract No. 05/2012 / HD-QTMT was signed between MRB and CENMA (as a consulting unit under the Ministry of Environment and Natural Resources), that is the Unit shall collect monitoring parameters air quality, noise, vibration, surface water quality, groundwater quality. This contract was ended the 1st period from May 2012 up to Aug 2013 and Phase 2 will be started from Sep 2013 to Feb 2015.

MRB will need the capacity to review the environmental monitoring reports submitted by the PIC. This work is to be undertaken on a monthly basis by an Environmental Specialist (ES). The ES is supported by an Environmental Expert (EE), who will prepare semiannual reports on the implementation of the EMP for submission to ADB.⁵³ The recommended format for the semi-annual environmental monitoring report is attached as Annex G.

In addition to the semi-annual environmental monitoring report, MRB also needs to submit to ADB an annual report which verifies the veracity of the monitoring information provided in the monthly and semi-annual monitoring reports submitted to ADB. The annual verification report will also provide an assessment of whether the various EMP provisions are being implemented in a thorough and timely manner. This verification is to be carried out by an Independent Environmental Auditing Expert (IEAE) acceptable to ADB who will prepare and submit reports annually to ADB.⁵⁴

MRB will also need the capacity to prepare a revised EIA and EMP in response to any unanticipated environmental impacts that may arise, or any changes in the detailed design after the EIA and EMP are completed. As proposed in section 5.9, MRB should establish a small unit in one of the existing departments to be responsible for these various environmental monitoring activities. The EE will assist with this capacity building.

In this context, the consulting services under this technical assistance will include the following:

- (i) Undertake environmental effects monitoring (air quality, noise, vibrations, water quality, soil/excavation spoils, etc.) during pre-construction and construction phases for depot, viaduct and tunnel components as specified in the EIA/EMP prepared based on ADB requirements. The consultant will engage under their contract a reputable organization or institution to carry out such monitoring. The environmental effects monitoring TOR is attached as **Annex C**.
- (ii) Monitor on a monthly basis the environmental performance of contractors in terms of implementation of mitigation measures as well as required monitoring activities (such as Land Subsidence and Settlement Monitoring at the Underground Section to be carried out by tunnel boring machine contractor, etc.) for pre-construction and construction phase as specified in the EMP and prepare corresponding report. Consolidate the monthly reports into semi-annual environmental monitoring reports to be submitted by MAUR to ADB. Prepare corrective action plans to address identified non-compliance issues.
- (iii) Monitor and report on the over-all implementation of all EMP provisions for pre-construction and construction phases
 - (i) Through an independent environmental auditing expert (external), undertake annual verification of monitoring reports submitted to ADB
 - (ii) In case of accidents/safety breaches, conduct detailed investigations to determine the cause/s and parties involved, effects/impacts/damages, affected parties and other relevant matters. Prepare a corrective action plan to address identified issues and to prevent such accidents/safety breaches from happening again.

Main Tasks - Environment Specialist (ES)

- (i) Undertake monthly monitoring work of the PIC in supervising the overall implementation of various EMP provisions and the environmental performance of contractors (in terms of implementation of mitigation measures for the construction phase as specified in the EMP/EIA and site specific environmental management action plans). Such monitoring will be carried out through site visits; review of relevant documents; interviews/meetings/consultations with

⁵³ As described in paragraph 80 of the Project Administration Manual (PAM) of February 2011

⁵⁴ As described in paragraph 81 of the Project Administration Manual (PAM) of February 2011

- affected people, local communities, local government offices and other stakeholders; and other methodologies to ensure comprehensive monitoring of EMP implementation.
- (ii) Prepare monthly environmental monitoring reports on EMP implementation for submission to HPC and MRB using the monthly report outline (see Annex G), and the site inspection report form.
 - (iii) Prepare environmental corrective action plans to address non-compliance issues identified during the monitoring.
 - (iv) Assist the Environmental Expert (EE) in reviewing the environmental management action plans/specific environmental management plans (e.g., Spoils Disposal Plan, Dust Control Plan, Noise Control Plan, etc.) to be prepared by contractors as specified in the EMP. Ensure that such plans are not in conflict with the provisions of the EIA/EMP.
 - (v) Ensure timely implementation of environmental effects monitoring and include corresponding results in the semi-annual environmental monitoring reports.
 - (vi) Undertake detailed investigations of accidents/safety breaches, prepare corresponding report and formulate a corrective action plan to prevent such accidents/safety breaches in the future.

Main Tasks - Environment Expert (EE)

- (i) Together with the ES, undertake the initial monthly monitoring and subsequent quarterly monitoring of the over-all implementation of various EMP provisions and the environmental performance of contractors in terms of implementation of mitigation measures for the construction phase as specified in the EMP/EIA and site specific environmental management action plans.
- (ii) During the initial monthly monitoring, train the ES on the conduct of monthly monitoring and monthly report preparation.
- (iii) Provide guidance to the ES to ensure that monthly monitoring and report preparation are done properly and in a timely manner.
- (iv) Prepare semi-annual monitoring reports based on the findings of the monthly monitoring activities and results of environmental effects monitoring. The semi-annual reports will follow the report outline shown in Annex G, and will be submitted to ADB through HPC/MRB.
- (v) Prepare environmental corrective action plans to address non-compliance issues identified during the monitoring.
- (vi) Report on the functioning of the grievance redress mechanism. Such report should be incorporated in the semi-annual reports.
- (vii) Review and approve the environmental management action plans/specific environmental management plans (e.g., Spoils Disposal Plan, Dust Control Plan, Noise Control Plan, etc.) to be prepared by contractors as specified in the EMP. Ensure that such plans are not in conflict with the provisions of the EIA/EMP.
- (viii) Provide training to MRB staff and undertake environmental management capacity building for MRB as specified in the EIA.
- (ix) Supervise conduct of environmental effects monitoring to ensure that this is consistent with the EIA/EMP requirements.

Main Tasks – Independent Environmental Auditing Expert (IEAE) (External)

- (i) Review and verify the veracity, accuracy, breadth, depth, and relevance of information provided by MRB to ADB with regard to EMP implementation.
- (ii) Determine if EMP provisions (mitigation, monitoring, reporting, etc.) are being conducted in thorough and timely manner and in accordance with the budget identified within the EMP.
- (iii) Prepare a report on the results of the review for submission to ADB.

The above tasks shall be undertaken on an annual basis (as soon as the two semi-annual environmental monitoring reports for each year becomes available) throughout the 5-year

construction phase and during the first year of Project operation. Verification of monitoring information submitted by MRB to ADB shall be undertaken through review of environmental monitoring reports and other relevant documents, site visit and interviews with affected households, local officials and other stakeholders. The IEAE should not be involved in the project supervision, conduct of regular monthly environmental monitoring and preparation of corresponding reports submitted to ADB.

Consultants Staff and Qualifications

- Environmental Specialist (national) – undertakes all tasks on regular (internal) monitoring of environment.
- Environmental Expert (national) - provides semi-annual reports and direction as required to local consultant, and undertakes environmental management capacity building for MRB.
- Independent Environmental Auditing Expert (international) – undertakes the external monitoring.

Consultant	Academic Qualifications	Experience
Environmental Expert (national)	Bachelor's degree in Environment Science or other related course.	Minimum of 15 years work experience in the production of EIA and EMP, and monitoring of environmental conditions and EMP, of which a minimum of 5 years should have been in similar assignments in developing countries. Experience in Vietnam is desirable
Environment Specialist (national)	At least a Bachelors degree in Environment Science or the related course	Minimum of 10 years experience. Experience of having undertaken ambient environmental monitoring for at least 12 months, EMP monitoring and reviews of environmental reports of at least one similar financier funded assignment
Independent Environmental Auditing Expert (international)	Masters degree in Environment Science other related courses	Minimum of 15 years work experience in the monitoring of environmental conditions and EMP, of which a minimum of 5 years should have been in similar assignments in developing countries. Experience in Vietnam is desirable

Inputs

- Environmental Specialist – Continuous inputs from mobilization to completion of the project to carry-out EMP monitoring and reporting requirements , 33 person months
- Environmental Expert – Initial inputs to assist in set up of monitoring activities and review and approval of environmental management action plans/specific environmental management plans; quarterly monitoring of EMP implementation, preparation of semi-annual environmental monitoring reports, and conduct of environmental management capacity building for MRB, 20 person months
- Independent Environmental Auditing Expert – Intermittent inputs from commencement of contract to 12 months after completion of works. Reviews to be undertaken every 12 months. Total inputs of 4 person months

Location

The International and National Environmental Specialists and Environmental Experts shall be located in the Consultant's established office in Ha Noi.

Deliverables

1. Monthly Progress Reports by the Environment Specialist – Brief reports with data and comments (as required) on PIC reports.
2. Environmental Expert –Monitoring Reports every 6 months.
3. Independent Environmental Auditing Expert - Verification of Environmental Monitoring Reports every 12 months.

3.8.5 Stakeholder Communication Strategy – Task 1.5.3**Background:**

A Stakeholder Communication Strategy (SCS) has been developed for the Hanoi Metro (Line 3) Project to: (i) ensure that all people or entities possibly affected by the project are aware of and clearly understand the project, its impacts and compensation entitlements, and meaningfully address stakeholder concerns using transparent and inclusive approaches; and (ii) ensure that all possible beneficiaries of the project are aware of and understand the project and its benefits, and the details of making use of the metro system, and foster demand amongst target stakeholders for the regular use of the metro.

MRB is expected to ensure that: (i) the SCS is fully implemented in accordance with ADB's Public Communications Policy (2011), including: (i) making project information available and accessible to stakeholders; (ii) designating a project focal point for implementing and monitoring information disclosure and dissemination, and facilitating regular contact with stakeholders and affected people; (iii) designing mechanisms for stakeholder feedback; and (iv) ensuring relevant project information is shared with interested stakeholders and affected people.

MRB currently has no Department that is responsible for SCS implementation, including communications and marketing. It has agreed to appoint a staff with expertise in public relations and passenger information systems to serve as focal point. However, the breadth and depth of expertise required to lead SCS implementation, including the full range of marketing and communication activities needed under this project, requires support of individuals with specific technical expertise this broader range of areas. In the previous phase of Technical Assistance, a 2 person-month national communication specialist was engaged by ADB to provide this support. Moving forward, additional support will be required. Accordingly, an international communication and marketing specialist (3 person months), and national communications expert (6 person months), will be engaged to support communication and marketing activities under the SCS.

Main Tasks: International Communication and Marketing Specialist

- (i) Work with designated MRB staff in reviewing the current status of the SCS, examine products and activities under development, and assess their relevance to the current situation. Support the continued implementation of relevant activities set forth in the SCS.
- (ii) Work with designated MRB staff, and if necessary, a qualified firm, to conduct public opinion research, both qualitative and quantitative, in order to gauge the opinion of stakeholders, their attitudes, and perceptions with regard to the project and the use of public transportation – particularly their inclination to use (or not use) the new metro system.
- (iii) Work with designated MRB staff in consulting senior MRB management in developing a long-term vision and long-term communication and marketing objectives for the metro project, around which the revised SCS will be built.
- (iv) Spearhead the development of a revised SCS and lead implementation. Revisions to the SCS will be based on a review and analysis of ongoing activities under the existing SCS, opinion research findings, and MRB management's long-term vision and objectives.

- (v) Lead the development of a SCS implementation plan, outlining the methodology, timeline, budget, activities, responsible parties, and coordination mechanisms to carry out implementation.
- (vi) Liaise with MRB staff and consultants responsible for resettlement and safeguards, to ensure necessary communication support is being provided.
- (vii) Generally advise and assist MRB in the conduct of all project communication and marketing activities. Provide mentoring to relevant MRB staff.
- (viii) Monitor and evaluate SCS and broader communication and marketing implementation, reporting findings to MRB management and ADB.

Main Tasks: National Communication Expert

- (i) Provide support for reviewing the current status of the SCS, examining products and activities under development, and assessing their relevance to the current situation. Support the continued implementation of relevant activities set forth in the SCS.
- (ii) Support as necessary the conduct of public opinion research, both qualitative and quantitative, in order to gauge the opinion of stakeholders, their attitudes, and perceptions with regard to the project and the use of public transportation – particularly their inclination to use (or not use) the new metro system.
- (iii) Support the the work for the international specialist and designated MRB staff in consulting senior MRB management in developing a long-term vision and long-term communication and marketing objectives for the metro project, around which the revised SCS will be built.
- (iv) Support the development and implementation of a revised SCS based on a review and analysis of ongoing activities under the existing SCS, opinion research findings, and MRB management’s long-term vision and objectives.
- (v) Support the development of a SCS implementation plan that outlines the methodology, timeline, budget, activities, responsible parties, and coordination mechanisms to carry out implementation.
- (vi) Support the international specialist in liaising with MRB staff and consultants responsible for resettlement and safeguards, to ensure necessary communication support is being provided.
- (vii) Provide assistance to MRB in the conduct of all project communication and marketing activities. Provide mentoring to relevant MRB staff.

Consultants staff and Qualifications:

Consultant	Academic Qualifications	Experience
International Communication and Marketing Specialist	Advanced degree in communication, marketing, or related fields.	At least 10-12 years’ experience in the development and implementation of communication and marketing strategies, and in managing high-level communication programs. Strong English language writing and speaking skills.
National Communication Expert	Advanced degree in communication, marketing, or related fields, or university degree with equivalent experience.	At least 10 years-experience working in communications, and/or international donor funded development projects. Experience designing and implementation communication and marketing activities. Fluent written and spoken Vietnamese. Strong written and spoken English..

Inputs:

The international communication and marketing specialist (3 person months), and national communication expert (12 person months), will work on an intermittent basis. Inputs from the consultant team will be continuous to inform their work through full project implementation.

Location:

Both specialists will work closely with the designated public relations counterpart at MRB, and will be located in the Consultant's established office in Ha Noi.

Deliverables:

- Public opinion research study
- Revises SCS
- SCS implementation plan
- Quarterly monitoring/evaluation reports

3.8.6 Gender Action Plan (GAP) Implementation Monitoring and Reporting – Task 1.5.4

Background:

The Hanoi Metro (Line 3) Project has been classified as effective gender mainstreaming. A gender action plan (GAP) has been developed to mitigate negative impacts and include positive design features. The gender action plan will include but not be limited to: (i) use of employment targets for women and gender-specific core labor standards for contracts and other employment generation, (ii) consideration of gender-inclusive physical design features in infrastructure, and (iii) mitigation of the gender-related resettlement impacts .

Related to this, MRB is expected to, ensure that: (a) GAP is fully implemented in accordance with ADB's Gender and Development Policy (1998) including, but not limited to: (a) use of employment targets for women and gender-specific core labor standards as part of all Works and other transport services employment generation; (b) consideration of gender-inclusive physical design features in new metro infrastructure and sustainable transport measures; (c) targets for women's participation and inclusion of gender-related content in capacity building activities; (d) reference to gender in studies, surveys and plans developed under the Project; and (e) mitigating gender-related impacts of resettlement including human trafficking.

MRB currently has appointed a staff to be a Gender focal point in overseeing and coordinating the GAP implementation, Monitoring and Reporting. However this person has little specific technical experience on Gender and Social Development for a Metro project to lead the GAP implementation, monitoring and reporting to ADB expected standard. In the current PMS contract a 10 person-month full time national gender specialist has been engaged by IDOM to provide this support. The TOR for this task is to be continued in this ToR, providing by an International Gender and Social specialist (4 person-months) and a national Gender specialist (12 person months). Both positions are intermittent and inputs are delivered along with the project timeline till end of the project (2019)

Main Tasks: International Gender and Social Specialist

- (i) Lead, prepare and submit to MRB and ADB for review an inception report that includes review of the GAP, understanding of the tasks and priorities and detailed implementation plan in agreement with MRB and other related consultants within 2 weeks from mobilization.
- (ii) Provide gender-related inputs to the design and construction process to ensure accessibility, safety, convenience and affordability to users with specific needs (including the poor, women with infant, pregnant women, people with disability, children, etc.) in the design and operation of the metro system.

- (iii) Provide input to the developments and implementing a gender-sensitive capacity development plan (on-the job training program) (in terms of contents, methodologies, and targeting both male and female participants).
- (iv) Work with Project Performance Monitoring Consultant to help MRB to review and revise the PMIS to ensure gender related targets in GAP and DMF are monitored and reported to ADB with relevant sex-disaggregated data.
- (v) Work with the national gender specialist to mentor the MRB gender focal point and his/her assistant in implementing, monitoring and reporting the GAP to ADB.
- (vi) Provide other gender-related technical assistance as requested by MRB, such as to different survey and assessment related to issues under (ii), (iii), above.
- (vii) At the end of the assignment, lead the preparation and submit a completion report on the GAP implementation following ADB requirements.

Main tasks – National Gender and Social Development Expert

- (i) Provide inputs to the assignment inception report that includes review of the draft GAP, understanding of the tasks and priorities and detailed implementation plan in agreement with MRB and other related consultants within 2 weeks from mobilization.
- (ii) Assist the International gender and Social Development Specialists in provide gender-related inputs to the design and construction process to ensure accessibility, safety, convenience and affordability to users with specific needs (including the poor, women with infant, pregnant women, people with disability, children, etc.) in the design and operation of the metro system.
- (iii) Work and support MRB gender focal point in Monitoring and reporting on contractors' compliance with gender specific core labor standards according to the contractors' contracts in recruitment of staff and workers for all civil workers, and awareness raising activities on HIV/AIDS prevention and anti-human trafficking contents for their workers/staff.
- (iv) Collaborate with PMU1 and PMS resettlement consultant to monitor (a) the implementation of the updated RP for the depot/access line (including livelihood restoration support activities), and (b) preparation of the updated RP for the underground section to ensure that gender issues are considered, including having female representatives in the resettlement committee, consulting separately with women from affected households, registering the names of both spouses in the allocated land or apartment from the project, having both spouses receive compensation payments (with signatures), paying due attention to complaints and grievances made by women as well as men; and ensuring specific measures of restoring incomes loss benefiting both men and women affected.
- (v) Securing inputs and advice from the international gender and social specialist, to work with other PMS's specialists in developing and implementing a gender-sensitive capacity development plan⁵⁵ (on-the job training program) (in terms of contents, methodologies, and targeting both male and female participants).
- (vi) Assist MRB/ gender focal point to ensure gender related targets in GAP and DMF are monitored and reported to ADB with relevant sex-disaggregated data
- (vii) Under the guidance of the international specialist, mentor the gender focal point and his/her assistant in implementing, monitoring and reporting the GAP to ADB
- (viii) Provide other gender-related technical assistance as requested by MRB.
- (ix) At the end of the assignment. provide inputs to the a completion report on the GAP implementation following ADB requirements.

⁵⁵ See the list of the training courses in Table 2.1, 2.2 in page 59- 63 of this ToRs.

Consultant staff and Qualifications:

Consultant	Academic Qualifications	Experience
International Gender and Social Specialist	At least a post graduate degree in the social science or related fields.	At least 8 years experience with the transport sector, and metro-line/railway projects, Familiarity with ADB Gender and Development policy Good English oral and writing skills.
National Gender and Social Specialist	At least a degree in the social science or related fields (post-graduate degree is an advantage).	At least 8 years-experience working on gender and development issues in development projects (preferably with internationally-financed projects), Familiarity with the government of Vietnam's Gender equality policies and practices, Be able to communicate in English and Vietnamese effectively , both orally and in writing.

Inputs:

- The international gender and Social specialist's inputs are intermittent and at specific times (as indicated the main tasks above) include but not limited to design review, tender evaluation, Metro Operation support, Rolling stocks assessment, safety management support, supporting the gender and sex-disaggregated monitoring system to monitor GAP and DMF gender related targets, training service provision (of different kinds). A total of 4 person months input is required.
- The national gender and Social specialist's inputs are intermittent and at specific times (as indicated the main tasks above) include but not limited to design review, tender evaluation, safety management support, training service provision (of different kinds), monitoring ADB resettlement plan implementation from gender perspective, guiding/mentoring MRB's gender focal point to monitor and report on GAP, supporting the development and delivery of gender –sensitive related training/capacity building, including GAP orientation and monitoring requirements of ADB. A total of 12 person months input is required.

Location:

- The International and National Gender and Social Development Specialists will be located at the Consultant's established office in Ha Noi. The MRB gender focal point will be located in the department's office of.

Deliverables:

- In addition to the inception and completion reports, the specialists at the end of each mission/inputs will provide a mission report to MRB detailing the inputs provided (including annexes if such required), the challenges, faced, the recommendations for the next mission and recommendations on GAP implementations to be followed up by the MRB/ MRB gender focal point.
- Draft GAP monitoring report (including GAP monitoring table updates) on a quarterly basis to be submitted to ADB by MRB.
- GAP PCR draft to be prepared by MRB based on ADB requirements/templates.

Table 1 Summary of Consultant Inputs for Implementation Support (Person Months)

Task	Expert position	Design Review	Tender Evaluation	Other Scheduled Inputs ⁵⁶	“As required” ⁵⁷ Assistance	Total International	Total Local	Comments
1.1 Project planning and reporting	Project Planning Expert			33		33		
1.2 Contract Management and Cost Control	Contract Management and Cost Control Expert			33		33		
1.3 Metro Operations	Metro Operations Expert			6	4	10		
1.4 Provision of Specialized Engineering Knowledge								
1.4.1	CBTC Systems Expert				5	5		
1.4.2	TBM Tunneling Expert			6	2	8		Provided during tunnel boring
1.4.3	Rolling Stock Expert			3	4	7		Provided at acceptance of first 3 trains
1.4.4	OCC/SCADA Expert			3	2	5		Provided at the acceptance of the OCC and SCADA systems
1.4.5	RAMS Expert				4	4		
1.4.6	Fire Protection and Evacuation Expert				3	3		
1.4.7	Safety Management Expert				5	5		
1.5 Meeting Financier Requirements								

⁵⁶ Person months of consultant staff input that can be scheduled in accordance with the General Work Program

⁵⁷ “As required” means when MRB considers expert assistance is required and approves mobilisation to site, such as when there is (i) Submission of documents (ii) Acceptance testing of equipment (iii) Variation Orders or Claims to be reviewed or (iv) A problem of some kind to be addressed.

Task	Expert position	Design Review	Tender Evaluation	Other Scheduled Inputs⁵⁶	“As required”⁵⁷ Assistance	Total International	Total Local	Comments
1.5.1 Resettlement Monitoring	Independent Resettlement Monitoring Expert			3		3	.	Reports every 6 months
	Resettlement Specialist			12			12	Continuous inputs
1.5.2 Environmental Monitoring	Environmental Expert			20			20	Reports every 6 months
	Environmental specialist			33			33	Continuous inputs
	Independent Environmental Auditing Expert			4		4		Prepares a report each year for submission to ADB.
1.5.3 SCS implementation , monitoring, reporting	International Communication and Marketing Specialist			3		3		Revised SCS and implementation plan.
	National Communication Expert			12			12	Quarterly M&E reports
1.5.4. GAP implementation , monitoring and reporting	International Gender and Social Specialist			4		4		Lead preparation of inception and completion report for submission to ADB and provide inputs to the GAP PCR draft
	National Gender and Social specialist			12			12	Lead and Prepare quarterly reports for submission to ADB and assist MRB with GAP updates every 6 months and GAP PCR draft.
ALL TASKS						127	89	

5 COMPONENT 2 - TRAINING AND CAPACITY BUILDING

5.1 Introduction

In Component 1, a number of international consultants in technically specialized fields of urban railway engineering are proposed to directly assist MRB staff in the implementation of Line 3. It is proposed that MRB make use of the presence of these experts in Ha Noi to provide training in their specialized technical fields to staff of MRB or other HPC agencies. Such training is seen as a cost effective means of knowledge and technology transfer.

Analysis undertaken of the requirements for capacity building in MRB suggested that capacity building to existing departments would be required for existing functions and new functions for MRB

5.2 Objective

To provide training for MRB staff and capacity building for strengthening MRB's organizational capacity to ensure the timely and successful implementation of Line 3, and to assist their professional development so as to further develop the metro system.

5.3 Scope of Work

3 training modes proposed:

Task 2.1: Specialized technical training implemented by specialists of Component 1.

Task 2.2: Training courses in the fields of particular concerns to the donors such as environment, resettlement monitoring, stakeholder communication strategy, gender action plan.

Task 2.3: Plan development and organization of 02 study tours to gain actual experience on TBM construction and supervision and Metro equipment installation in Asian countries.

At this time, it is unable to identify all provision regimes that MRB can utilize for their staff training. On the basis and aim of this component, consultant can recommend topics that they need to receive and other training provision schemes with conditions that the costs are included in their financial proposals.

5.4 Training Provided by International Specialists – Task 2.1

Each of the international experts visiting Ha Noi will be expected to provide a training course for staff of MRB (and other agencies at the invitation of MRB), with these parameters:

- (i) The courses are intended to give staff a basic understanding and technical knowledge of the field, so that they are (a) able to hold informed discussions with the PIC and IC 2.1b2 and 2.2 consultants on the drawings and other contract documents, and (b) are able to understand the implications of matters arising during implementation. The amount of theory should be kept to a minimum, with the focus on knowledge of direct practical value to the attendees.
- (ii) The number of attendees will be determined by MRB, but will be no less than 5 for any course. It is considered that not just the staff working directly in the field should attend, but any staff member who is interested in order to further their own professional development. In addition, the pool of staff capable of working in the field should be expanded in order to meet future requirements, including Line 2 and the proposed Line 3 extension. For these reasons, it is considered that an average attendance of at least 10 people should be budgeted. The potential audience for the more general courses (see list under task 2.4) could be almost all MRB staff.
- (iii) For the purposes of costing it is assumed that courses would last on average for 3 days.

- (iv) Specialists would be expected to prepare the technical content, but would be provided with assistance from training experts for preparation of training media (slides, course handouts etc.). However if the specialist considers there is a commercially available course that could be purchased for them to deliver in Ha Noi, this can be suggested.
- (v) The experts would also be expected to suggest short courses that individual (or small numbers) of MRB technical staff could attend to further their knowledge of the subject.

The suggested list of courses, with indicative contents is shown in Table 2.1

The cost for renting office and the cost for training courses, document and the cost for breakfast and main meal shall be taken into account by the Consultant in their financial proposal.

5.5 Training in areas of particular concern to financiers – Task 2.2

ADB has included certain requirements on MRB in their loan document and the Project Administration Manual, in addition to requirements related to project implementation discussed in Component 1 of this TOR. These requirements concern;

- (i) Resettlement Monitoring
- (ii) Environmental Monitoring
- (iii) Stakeholder Communication Strategy
- (iv) Gender Action Plan

This task will provide for training in these fields. ADB staff will suggest appropriate courses for staff of MRB and other agencies to attend. The suggested list of courses, with indicative contents is shown in Table 2.2

5.6 Overseas Study Tours -Task 2.3

To be qualified to fulfill the functions and tasks, MRB staff in some specific technical field will need experience on actual site. Due to the unavailability of metro line in Vietnam, it is necessary to organize study tours to understand about metropolitan railway outside Vietnam, which will be financed from the government counterpart funds for the Project.

The consultant shall make recommendations for two suitable study tours and prepare the study tour plans and schedules.

Table 2.1 Summary of Training Courses to be given by Experts from Component 1

No.	Contents	Training level	International specialists implementing the course	Course Outline	Attendee	Quantity
1	Works quality management training	Basic		(i) National standards in construction activities (ii) Quality management of construction surveys (iii) Quality management of works construction design (iv) Quality management of works construction (v) Problem handling in works construction, operation and use	MRB's staff in charge of construction supervision	30
2	Training in quality management of equipment installation	Basic		(i) Principles in monitoring and acceptance of metro equipment installation (ii) Requirements on equipment installation (iii) Equipment quality inspection (iv) Supervision in equipment installation construction preparation (v) Supervision of equipment installation (vi) Testing and commissioning (vii) incorporating and implementing equipment installation acceptance	MRB's staff in charge of supervision of equipment installation	30
3	Types of maintenance contracts of metropolitan railway projects	Basic		(i) Types of maintenance contracts of metropolitan railway projects (ii) Advantages and disadvantages of popular contract types used in Europe and Asia	MRB's staff in charge of contract development and management	30
4	Advanced project management	Advanced		(i) Contract management (ii) Project planning	MRB's staff	30

No.	Contents	Training level	International specialists implementing the course	Course Outline	Attendee	Quantity
				(iii) Financial management (iv) Contract negotiation skills		
5	FIDIC contract	Advanced		(i) Adjustment (ii) Dispute settlement (iii) Payment	MRB's staff in charge of contract development and management	30
6	Management of on-ground utilities inside railway safety corridor			(i) principles in railway safety corridor protection (ii) protection scope of railway works and safety corridor (iii) Risk analysis and utility management methods	MRB's staff in charge of construction supervision	30
7	Experience in construction, management and problem handling, responsibilities of parties during pre-, while- and post-construction stages by TBM. Monitoring at tunnel construction site, subsidence monitoring, relocation of on-ground utilities.	Basic		(i) Experience in construction, management and problem handling, responsibilities of parties during pre-, while- and post-construction stage by TBM. (ii) Contents and methods of monitoring at tunnel construction site, subsidence monitoring, on-ground utility removal.	MRB's staff in charge of construction supervision	30
8	Experience in implementing the package for system safety assessment in accordance with international practices	Basic		(i) Listing European and Asian standards utilized to assess metropolitan railway system safety (ii) The sequences of system safety assessment implementation in accordance with international practices. (iii) Risk assessment and analysis through assessment stages (design, construction, equipment installation, operation testing)	MRB's staff in charge of construction supervision	30
9	Experience in Employer's	Basic		(i) The role of the Employer in the	The staff in charge	30

No.	Contents	Training level	International specialists implementing the course	Course Outline	Attendee	Quantity
	role in implementation management towards equipment package (Rolling stock, telecommunication, signalling) as per the content of the contract "Design, supply, installation and construction".			implementation management of equipment package (ii) Management procedures of the installation of metropolitan equipments popularly used in the world	of railway equipment installation monitoring	
10	METRO operation and maintenance	Advanced		Basic principles in metro operation – what the main concerns of operators are and how they differ from the ones of design engineers, equipment contractors, equipment and operation principles of civil works The significance of the ability to operate and maintain, and how this will affect metro line design if operation and maintenance costs are minimized while ensure the best service The significance of planning and calculation of maintenance costs and how this will affect the ability in service delivery 18 hours/day, 365 days/year	MRB's staff	30
11	CBTC signalling system	Basic		Definition of CBTC and core components including rail margins and equipment on the train and inside cars CBTC functions including sub-systems of ATP, ATO and ATS, role and functional requirements of each sub system Current international standards and practices for the equipment available in international market	Staff in charge of railway equipment installation supervision	30

No.	Contents	Training level	International specialists implementing the course	Course Outline	Attendee	Quantity
12	OCC/SCADA operation center	Basic		The role of OCC and SCADA OCC – ATS system, Electrical, Mechatronics, Telecommunication, Operation management and Maintenance management SCADA system – Construction management of stations and sub-stations, technical system, (signaling, traction, and E & M)	The staff in charge of railway equipment installation supervision	30
13	Construction, Management and Operation of ticketing system			(i) Operation management of ticketing system equipment (fare, equipment inside stations, station controlling center, the center for all line) (ii)	MRB's staff	30
14	Project management model			(i) Popular models of project management applied in Europe (ii) Advantages and disadvantages of management models (iii) Selection of an ideal model (iv) Performance organization of project management model	MRB's staff	30
15	Project management software					

Table 2.2 Summary of Training Courses on ADB Requirements

#	Content	Training level	Course outline	Participants	Quantity
16	Environmental monitoring	Basic	(i) ADB's documents, procedures and requirements and differences as compared to Vietnamese procedures (ii) The best international practices in environmental management and compliance monitoring (iii) Preparation of Environmental Management Plan (EMP) and inclusion in contract documents. (iv) Implementation of environmental monitoring	MRB's staff	30
17	Resettlement monitoring	Basic	(i) ADB's documents, procedures and requirements and differences as compared to Vietnamese procedures (ii) The best international practices in environmental management and compliance monitoring (iii) Implementation of resettlement monitoring / Implementation of environmental monitoring	MRB's staff	30
18	Stakeholder Communication Strategy	Intermediate	(i) ADB's Public Communication Policy requirements, and SCS requirements. (ii) Preparing SCSs and implementation plans. (iii) International best practices in communication and marketing for public transportation systems and metro rails: traditional and electronic/online advertising, public relations, website development and maintenance, social media, public information systems, collateral marketing product development.		
19	Gender Action Plan	Basic	(i) Gender integration in the project (ii) Including gender contents (where applicable) in Terms of Reference for consultant, studies and plans (iii) Division of data by gender	MRB's staff	30

6 CONTRACT ADMINISTRATION AND REPORTING

6.1 Contract Administration

The Implementing Agency for the services is the Ha Noi Metropolitan Rail Transport Project Board (MRB). PMU1 of MRB will administer the services on behalf of MRB.

The Consultants shall report on a day to day basis on the technical aspects of the assignment as follows:

Component 1 – Director of PMU1

Component 2 – Chief of Human Resources Division

A Technical Steering Committee is to be established within MRB for technical oversight of the work, and to meet *monthly* review the monthly progress reports. This MRB Steering Committee will be chaired by the Head of MRB.

HPC has established a **Strategic Steering Committee** for the Project, chaired by the Vice Chairman of the Ha Noi Peoples Committee responsible for Infrastructure. Membership of the Steering Committee comprises senior representatives of HPC agencies with a direct interest in the Project, as well as representatives of the Co- Financiers, and key Government of Vietnam ministries. This Committee will meet on a *quarterly basis, or as required to make decisions on key issues.*

6.2 Progress Reporting on the Consultancy Contract

Inception Report: 30 days after signing of the consultancy contract the Consultant shall submit an Inception Report. The Inception Report shall

- Describe the Consultant's assessment of the projects difficulties in terms of progress and possible cost issues.
- Describe all the main approval/evaluation and work flows in MRB and the approving authorities (related to UMRT3) identifying each party involved in the process and his role
- Propose and argue (with due respect to the Vietnamese regulation) changes to and streamlining of the procedures/work flows which would lead to
 - shorter approval/work cycles and /or
 - better or more timely project information
 - higher transparency
 - savings in terms of less manpower used
- Suggest possible changes to the Consultants Work Plan

The Inception Report shall be approved by the funding agencies and MRB management.

Monthly Reports: The consultants shall submit brief reports each month on the financial and physical progress of the consultancy contract. The report shall indicate arrivals and departures of consultants, elapsed time and person days on the assignment in the preceding month and forecast for the coming month. The report shall provide a description of the key events of the reporting month, difficulties and concerns and how these were/will be mitigated as well as anticipated key events of the following month. The report shall provide an up-to-date snapshot of the progress achieved against the time elapsed and indicate where corrective actions are needed and how these actions will be facilitated. Expenditures, billing and payments received should also be shown, as well as a list of project meetings and consultations held.

Quarterly work reports: The consultant shall submit every quarter of the year a work report to the funding agencies and MRB, reporting on what activities they have done during the previous period and what activities are planned for the coming period. The AWP should also indicate any proposed changes to the Consultants original Work Plan and mobilization

schedule as well as report on quarterly contract awards and disbursements of each contract per each financier.

Final Report: At the end of the assignment, the Consultants will provide a summary report including comparison of actual expenditures compared to budget, consultant inputs compared to work plan, and other assessments which could be useful in designing future assignments of a similar type. The final report should follow the format of the ADB's Project Completion Report and report the overall performance of the project against the targets and indicators set in the Project Design and Monitoring Framework.

Submission and Approval of Reports: All reports should be prepared in English language. Five (5) hard copies should be submitted to the MRB, and 2 copies each to ADB, AFD, and DGTresor. The format of each report will be consistent with the requirements of MRB and the financiers, with the format agreed prior to first submission. All reports should also be submitted electronically in a format appropriate to the size of file to all co-financiers (including EIB). MRB and the co-financiers are jointly responsible for approving the progress reports.

6.3 Services and Facilities to be provided by the Consultants

Consultant Inputs

The academic qualifications and experience required for each of the consultants is provided in each section of the detailed scope of works. A summary of the anticipated numbers of person months of service the Consultant is to deliver for each specialist and Task is indicated in Table 1.

The indicated total months of inputs are 127 person months of international experts and 89 person months of local/national experts.

All consultants will be employed on a Time Based contract.

For Component 1 in particular, the total input of the short term experts for Tasks 1.3 – 1.5 shall be as stated in Table 1. However the exact number of person months delivered by each expert shall be determined and agreed as the project evolves and the needs arise so that the total number of person months is a pool (divided into international and local experts) from which the project can acquire resources as the contract budget allows. All changes having a cost impact need to be agreed between ADB, MRB and the Consultant through a formal submission and approval of a Contract Variation Request. Also, any changes that do not have any cost impacts, should be pre-agreed between ADB, MRB and the Consultant before the change becomes effective. The planning of each mission of each short time expert shall be proposed by the Team Leader to MRB and agreed with MRB. The use of "as required" experts shall be agreed by MRB in advance of mobilization. ADB shall at all times be kept informed of the updated mobilizations schedule, including the "as required" experts.

The Consultants shall fill in the estimated number of translator person months included in their offer.

Any equipment or other facilities purchased under the contract to undertake the services must be handed over the MRB at the completion of the contract.

Team Leader

The Consultant shall appoint either the project planning expert or the contract management/cost control expert to be the Team Leader responsible for the overall management of the consulting services assignment, for the contact with the funding agencies, providing work plans and progress reports to the funding agencies for coordinating the inputs of the individual experts and for all official dealings with MRB. The Team Leader

shall have power of attorney to act on behalf of the Consultants in any contractual matters regarding the assignment.

Software and Licenses

Where the Consultants provides software (except for ordinary MS-office programs) in order to conduct their duties, e.g. provision of a planning tool, the software (or the license) including all data in them shall be the property of MRB. Software shall be provided in sufficient number of copies to conduct the work properly.

The Consultants shall provide the necessary licenses for the software for the work to be conducted properly in MRB (for at least 2 users – experts and counterpart) and the Licenses shall be without time limitations if such licenses are available from the supplier. If not the licenses shall be valid until project completion.

Project language and translations

The project language is both English and Vietnamese which means that all important documents are translated. The ruling language will be English. All documents to be submitted to ADB, as well as all communication, including emails, letters etc. with ADB shall be in English language.

Documents issued by consultants and contractors are to be in English.

The Consultants must translate summaries of all their reports into Vietnamese. These summaries shall as a minimum include all assumptions made (including norms etc.), all conclusions found and a short description of the process and calculation methods used.

MRB will translate documents which are to be issued to the Vietnamese authorities.

The Consultants must translate other documents from Vietnamese (it could be documents issued by authorities and not yet translated by MRB) which they deem necessary for performing their duties.

The standard of English of MRB staff ranges from very limited to good. Although this consultancy has an English language training component, the Consultants must make provision for the translators necessary for communication with the MRB staff and Vietnamese authorities. The consultant shall also provide translators and interpreters on a need basis during ADB's project review and other missions.

All international and local experts provided by the consultants must be fluent in the English language (speaking, reading and writing).

Living accommodation and transport

The Consultants must provide their own living accommodation while working on the assignment, and include the out of pocket expenses in their proposal.

Transport

The Consultants must provide their own transport for work and other activities while working on the assignment, and include the out of pocket expenses in their proposal. At least one vehicle must be provided on a continuing basis for the use of the consultant's long term staff.

6.4 Support to be provided by the Client (MRB)

Access to MRB Staff and Other agencies

The Consultants shall have to work with all departments of MRB. MRB shall ensure free access of the consultants to interact with any MRB staff member. MRB in a timely manner shall facilitate such meetings and working relationships between the consultants and its staff.

The Consultants will also need to work with the PIC and the Independent Consultants in order to understand the design and the reasoning behind the design. MRB shall actively support such cooperation and ensure that the experts have the necessary access to the PIC and the Independent Consultants.

The Consultants shall also have to interact with authorities and possibly other PMUs involved in public transport projects in Ha Noi in order to pursue their assignments. The Consultants shall agree with MRB to what extent and in what form such interaction shall take place. MRB shall facilitate in a timely manner any interaction and meetings between the consultant's staff and government authorities as well as provide a safe environment for the consultants to communicate with the public when necessary.

Documentation

MRB shall provide all readily available documentation necessary to undertake the assignment to the Consultant. This will include, for example the Feasibility Study, Design Drawings and Contract Documents, and reports produced by other consultants working on the project, especially those prepared by the PMS –phase 1 consultants.

Counterpart Staff

MRB will designate counterpart staff to work with the long and short term experts in the specialized technical areas of the assignment, particularly on the activities in Task 1. These staff will be full time staff members of MRB, and will act as the contact persons within MRB for their designated technical areas. MRB will provide the names of the counterpart staff and ensure their full mobilization before the start of the consulting services. MRB will send the CV's of the proposed counterpart staff to ADB for information and any comments before engagement of this staff.

7 PROJECT OUTPUTS (DELIVERABLES)

The project outputs (or deliverables) to be produced by the consultants are summarized in Table 3.

Table 3: Summary of Outputs/Deliverables

*Months from contract signing, unless otherwise indicated.

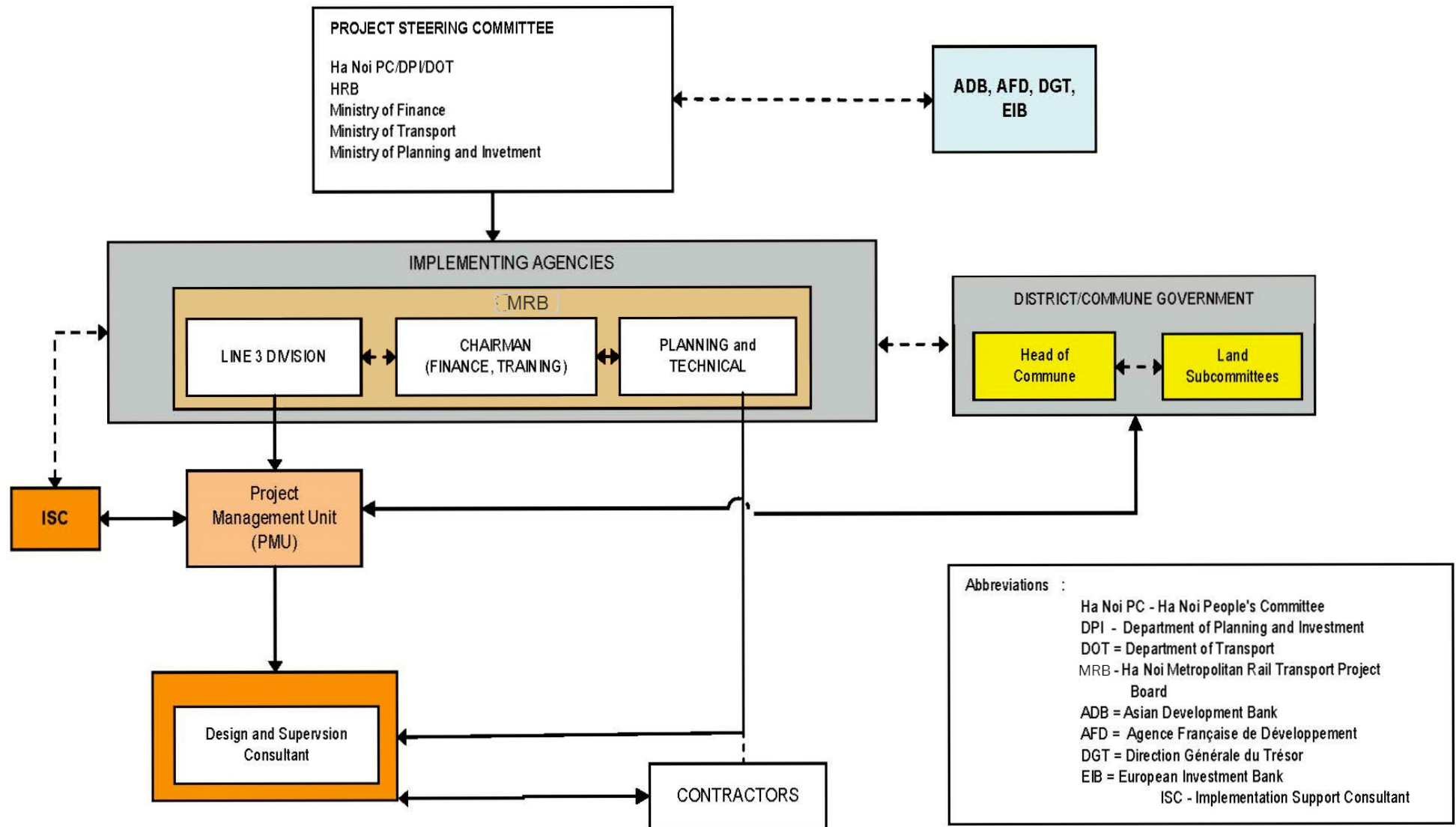
No	Task / Name of Report	Delivery date *	Number of report
1	Inception Report	30 days after signed contract	1
2	Monthly report	Each month after starting the consultant's services	33
3	Report on monthly plan preparation	After 3 months	30
4	Report on monthly cost	After 3 months	30
5	Report on monthly contract management	After 6 months	27
6	Report by CBTC expert	After mobilization	
7	Report by TBM expert	After mobilization	
8	Report by rolling stock expert	After mobilization	
9	Report by OCC/SCADA expert	After mobilization	
10	Report by RAMS expert	After mobilization	
11	Report by Fire Protection expert	After mobilization	
12	Report by safety management expert	After mobilization	
13	Report by monthly resettlement monitoring expert	Monthly	33
14	External Report on resettlement monitoring	Semi annual	6
15	Report on monthly Environmental Monitoring	Monthly	33
16	Report on Environmental Monitoring	semi-annual	6
17	External Report on Verification of Environmental Monitoring Information	Annually	4
18	Report on summary of training course	After each training course	
19	Report on overseas training course	Before each overseas visit	2
20	Report on summary of overseas training course	After each overseas visit	2
21	Report on training program of year 1	2 months	1
22	Report on training program of year 2,3	12&24 months	3
23	Draft FMSAP Report to be prepared jointly with MRB/PMU1	4 months after mobilization	2
24	Draft Investment and Maintenance Cost Baseline Report	6 months after mobilization	2

LIST OF APPENDICES

Appendix A	MRB Organization Chart and description of the responsibilities of each functional unit
Appendix B	Feasibility Study Report 11.12.2008 (to be provided by MRB)
Appendix C	Environmental effects monitoring TOR (to be provided by MRB)
Appendix D	MRB progress report to HPC (To be provided by MRB)
Appendix E	TOR of Consultants IC 2.1 and 2.2 (to be provided by MRB)
Appendix F	TOR for COTEBA
Appendix G	Project Semi-Annual Environmental Monitoring Report Outline
Appendix H	Outline Contents of Training Programs
Appendix I	Decisions on Working Team for O & M and assistance group (to be provided by MRB)

Appendices B, C, D, E, F and I are available in electronic format, but are not attached.

Appendix A - ORGANIZATION CHART



Appendix G - Project Semi-Annual Environmental Monitoring Report Outline

The borrower/client is required to prepare periodic monitoring reports that describe progress with implementation of the project EMP and compliance issues and corrective actions. A sample outline which can be adapted as necessary is provided below. Not all sections will be relevant in all cases. Ranking systems for compliance, mitigation effectiveness, etc., are indicative examples only, and can be modified as appropriate.

1. Introduction

1.1. Report Purpose

1.2. Project Implementation Progress

2. Compliance with ADB loan covenants and applicable government laws, regulations and requirements -Status of compliance with ADB loan covenants and government environmental requirements

3. Changes in project scope

Such as change in alignment or footprint in case of horizontal infrastructure, implementation of additional Project component/s, and corresponding safeguard measures undertaken, if applicable.

4. Incorporation of Environmental Requirements into Project Contractual Arrangements - Manner by which EMP requirements are incorporated into contractual arrangements, such as with contractors or other parties.

5. Summary of Environmental Mitigations and Compensation Measures Implemented

Based on EMP; may include measures related to air quality, water quality, noise quality, pollution prevention, biodiversity and natural resources, health and safety, physical cultural resources, capacity building, and others.

6. Summary of Environmental Monitoring

6.1. Compliance Inspections

6.2. Summary of Inspection Activities

6.2.1. Mitigation Compliance¹

6.2.2. Mitigation Effectiveness²

6.3. Emission Discharge (Source) Monitoring Program (if relevant)

6.3.1. Summary of Monitoring

6.3.2. Results

6.3.3. Assessment³

6.4. Ambient Monitoring Program

6.4.1. Summary of Monitoring

6.4.2. Results

6.4.3. Assessment⁴

7. Key Environmental Issues

7.1.1. Key Issues Identified (e.g., non-compliance to loan covenants, EMP and/or government environmental requirements; insufficient mitigation measures to address Project impacts; complaints; incidents; accidents; etc.)

7.1.2. Action Taken

7.1.3. Additional Action Required

8. Conclusion

8.1. Overall Progress of Implementation of Environmental Management Measures⁵

8.2. Problems Identified and Actions Recommended

Appendices

1. Site Inspection / Monitoring Reports

2. Ambient Monitoring Results
3. Photographs
4. Others

Notes

1 Overall compliance with mitigation implementation requirements could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (all required mitigations implemented)
2. Good (the majority of required mitigations implemented)
3. Fair (some mitigations implemented)
4. Poor (few mitigations implemented)
5. Very Poor (very few or no mitigations implemented)

Additional explanatory comments should be provided as necessary.

2 Effectiveness of mitigation implementation could be described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (mitigations are fully effective)
2. Good (mitigations are generally effective)
3. Fair (mitigations are partially effective)
4. Poor (mitigations are generally ineffective)
5. Very Poor (mitigations are completely ineffective)

Additional explanatory comments should be provided as necessary.

3 Discharge levels should be compared to the relevant discharge standards and/or performance indicators noted in the EMP. Any exceedences should be highlighted for attention and follow-up. In addition, discharge levels could be compared to baseline conditions (if baseline data is available) and described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (overall conditions are generally improved)
2. Good (conditions are maintained or slightly improved)
3. Fair (conditions are unchanged)
4. Poor (conditions are moderately degraded)
5. Very Poor (conditions are significantly degraded)

Additional explanatory comments should be provided as necessary.

4 Ambient environmental conditions should be compared to the relevant ambient standards and/or performance indicators noted in the EMP. Any exceedences should be highlighted for attention and

follow-up. In addition, ambient environmental conditions could be compared to the baseline conditions (if baseline data is available) and described in qualitative terms or be evaluated based on a ranking system, such as the following:

1. Very Good (overall conditions are generally improved)
2. Good (conditions are maintained or slightly improved)
3. Fair (conditions are unchanged)
4. Poor (conditions are moderately degraded)
5. Very Poor (conditions are significantly degraded)

Additional explanatory comments should be provided as necessary.

5 Overall sector environmental management progress could be described in qualitative terms or be

evaluated based on a ranking system, such as the following:

1. Very Good
2. Good

3. Fair
4. Poor
5. Very Poor

Additional explanatory comments should be provided as necessary.

Appendix H - Outline Contents of Training Programs

- a. **Project Scheduling** including in the use of proprietary software for establishing, maintaining and updating a project schedule. It should be noted that the project schedule should include in addition to engineering design and construction, all the administrative activities associated with obtaining clearances as well as in meeting the requirements of the four financiers of project funds. The PIC is using the Primavera program, and has indicated they will provide a terminal in the MRB Office together with a license for use of the software.
- b. **Budgeting and Cost Control** for MRB as the Project Owner. The PIC will be responsible for verification of works completed and signing the certificates for payment. The PIC will also be responsible for reviewing and approving (or making recommendations to approve) requests for cost increases on contracts. All other aspects of cost control will be managed by MRB. Procedures for cost of costs under Vietnamese regulations are strictly defined. The consultant will need to provide training in methods used in major projects and explain clearly the differences with Vietnamese documents, regulations and procedures.
- c. **International Procurement and FIDIC Procedures.** Procurement of works and equipment to be financed by ADB is to be undertaken using ADB Standard Bidding Documents (SBD) and procedures. These are based on FIDIC Forms of Contract. Other financiers will be using Bidding Documents and procedures which are similar in essence. All procurement operations are to be undertaken by the PIC, including the drafting of the recommendations for award of contracts. The procurement assessment undertaken by ADB during project preparation indicated that MRB staff have limited knowledge of these documents and procedures. Taking account of any specific requirements of ADB for procurement training, the consultant will provide training and explain clearly the differences with Vietnamese documents, regulations and procedures. The consultant will also explain the time periods for review and approval by the Project Owner of documents and the various steps in the procurement process, including the recommendation to award.
- d. **Contract Management** The management of contracts once signed is the responsibility of MRB. The consultant will provide training and explain clearly the requirements under ADB procedures and the differences with Vietnamese documents, regulations and procedures. The consultant will also explain the time periods for review and approval by the Project Owner of cost increases and payments.
- e. **International Standards** The metro line 3 in Ha Noi will be the first metro line to be constructed in Vietnam. There are no Vietnamese technical standards for many of the civil works, equipment and operations to be undertaken. The consultant is to introduce MRB staff to the standards in use internationally in similar projects and to explain how when and where such standards should be used. Where there are Vietnamese standards, the consultant is to explain the differences with International standards. The consultant is also to describe the formulae or other engineering calculations using international standards, and how these differ from Vietnamese methods, and the likely impact on designs and specifications of works.
- f. **Metro construction** – As noted above, the metro line 3 will be the first metro line to be implemented in Vietnam. As a result staff of MRB have only a limited understanding of the concept of a metro, or the complexities involved in planning, design, implementation, commissioning and initial operation of Line 3. The consultant will design and deliver a course to provide all staff of MRB with a basic introduction to this topic, and to indicate the

relationship between the work of the different MRB departments and the metro implementation.

- g. **Environment** It has been agreed between the GoV and ADB that the portions of the project financed by EIB, DGT and AFD will abide the provisions of the ADB Safeguard Policy Statement (SPS). This means that all portions of the project must abide by the ADB requirements relating to environmental management and monitoring. EIA and EMP have been developed, as well as requirements for regular and independent monitoring of environment outcomes. However there is currently no unit in MRB responsible for environmental matters. It is proposed that such a unit be established as another task of this TA (see below). The consultant will provide environmental awareness seminars for MRB mid-level managers and training through workshops and hand-on participation to MRB staff so that they:
- i. Are familiar with ADB documents, procedures and requirements, pointing out in particular any differences with Vietnamese procedures.
 - ii. Are able to work as counterparts with the local and international specialists to be hired to conduct the regular and independent environmental monitoring of the project.
 - iii. Will ensure that the regular monitoring (by local experts) and independent monitoring (by international experts) is undertaken
 - iv. Are able to:
 - a. implement international best practice on environmental management and compliance monitoring
 - b. integrate environmental management plans (EMP) in tender and contract documents
 - c. prepare EMPs
 - d. conduct environmental monitoring and prepare corresponding reports
 - e. monitor and report on occupational health and safety issues related to the project and implement necessary mitigation measure
- h. **Resettlement** It has been agreed between the GoV and ADB that the portions of the project financed by EIB, DGT and AFD will abide by the provisions of the ADB Safeguard Policy Statement (SPS). This means that all aspects and contracts of the project must abide by the ADB requirements relating to the implementation and monitoring of resettlement. A "Land Preparation" Department exists within MRB which is familiar with land acquisition and resettlement to Vietnamese regulations. The consultant will provide training so that MRB staff
- i. Are familiar with ADB documents and procedures, pointing out in particular any differences with Vietnamese procedures
 - ii. Are able to work as counterparts with the local and international specialists to be hired to conduct the regular and independent environmental monitoring of the project.
 - iii. Will ensure that the regular monitoring (by local experts) and independent monitoring (by international experts) is undertaken.
- i. **Stakeholder Communications** A Stakeholder Communication Strategy (SCS) has been prepared for the project. The ADB Project Administration Manual (PAM) requires that MRB implement this SCS and appoint a designated focal point for implementing and monitoring the SCS, including information dissemination, information disclosure, and stakeholder relations. Under this TA, consultants will support MRB in undertaking capacity development in communication and marketing, providing training so MRB staff are better familiarized with ADB's Public Communications Policy and measures needed to successfully develop and

implement the SCS, as well as ensuring that MRB staff can more effectively carry out broader communication and marketing requirements in support of the project.

- j. **Gender and Development** A Gender Action Plan (GAP) has been prepared for the project. The ADB Project Administration Manual (PAM) requires that MRB implement this GAP and appoint a full time gender specialist. Under a separate task of this TA (see below) the consultant will support MRB in the appointment of the gender specialist undertake capacity development to mainstream the GAP. The consultant will provide training so that MRB staff pay particular attention to implement these aspects of the capacity building program for gender development noted in Paragraph 73 of the PAM:
- i. Gender mainstreaming, and targets for the participation of women in all project – related capacity development activities
 - ii. Gender aspects are considered (where appropriate) in all TOR for consulting services and in studies and plans prepared under the project
 - iii. Separate targets for men and women on the HIV/AIDS and Human Trafficking Prevention Programs developed for the project.
- k. **Operations and Maintenance Planning** In the Loan Agreement HPC is required to
- i. Establish an operations and maintenance mechanism for project facilities
 - ii. Establish an operations and maintenance company to ensure that the railway network is operated and maintained in good condition
 - iii. Prepare and present to ADB an annual maintenance report

In relation to (iii), the consultant is to provide classroom and on the job technical training to assist MRB staff in the preparation of annual maintenance reports.

- l. **Project Performance Monitoring:** MRB is required to establish a Project Performance Monitoring System, as discussed in PAM Section XI Performance Monitoring, Evaluation, Reporting and Communication. This is a high level monitoring system concerned with the overall impacts and outcomes of the project as well as the progress with key project outputs. This system complements the monthly progress reporting provided by the project implementation monitoring and reporting systems, discussed under Key Task TA 1. The Aligned Monitoring Tool (AMT) developed for ODA Projects in Vietnam is used for this higher level project reporting. The AMT includes a provision for compliance monitoring – namely the monitoring of the compliance by HPC with the loan agreement undertakings and covenants. Under a separate task of this TA, the consultant will support MRB in establishing a Project Monitoring and Evaluation (M&E) unit, and the undertaking of project performance monitoring. The consultant will provide classroom and on-the- job training to for MRB staff in:
- i. Use of the Aligned Monitoring Tool (AMT)
 - ii. Collection of the baseline data for the key performance indicators
 - iii. Collection of data during the implementation period of the project.
 - iv. Submission of quarterly monitoring reports, and annual evaluation reports
 - v. The intention is that after this training, and an initial period of support from consultants (see later section), MRB should in a step by step process assume full responsibility for project performance monitoring.
- m. **Financial Management (FM)** Most MRB staff have limited experience of externally financed projects. The consultant is to consult with ADB FM specialists, then design and provide training as identified in the ADB FM Assessment undertaken during project preparation.

The different financiers have different requirements with respect to FM procedures and documentation, particularly with respect to disbursements for payment of invoices and withdrawals of loan funds. The consultant is therefore to consult with the FM specialists of other financiers then design and provide training to enable MRB staff to meet these requirements.