



RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF
VIETNAM ROAD ASSET MANAGEMENT PROJECT
APPROVED ON DECEMBER 12, 2013
TO
Socialist Republic of Vietnam

TRANSPORT

EAST ASIA AND PACIFIC

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ABBREVIATIONS AND ACRONYMS

DRVN	Directorate for Roads of Vietnam
EIA	Environmental Impact Assessment
EM	Ethnic Minority
EMP	Environmental Management Plan
EMDP	Ethnic Minority Development Plan
ESIA	Environmental and Social Impact Assessment
ERR	Economic Rate of Return
FS	Feasibility Study
GOV	Government of Vietnam
HDM-4	Highway Development and Management Model (Version 4)
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
IDA	International Development Association
IFRs	Interim Financial Reports
IRI	International Roughness Index
ISDS	Integrated Safeguards Data Sheet
ISR	Implementation Status and Results Report
MOF	Ministry of Finance
MOT	Ministry of Transport
NRN	National Road Network
NCB	National Competitive Bidding
NH	National Highway
ODA	Official Development Assistance
PAD	Project Appraisal Document
PBC(s)	Performance-Based Contracts
PDO	Project Development Objective
PMU	Project Management Unit
PPCs	Provincial People's Committee
RAMS	Road Asset Management System
RAP	Resettlement Action Plan
RETF	Recipient-Executed Trust Fund
RMF	Road Maintenance Fund
RNIP	Road Network Improvement Project
RF	Results Framework
RP	Resettlement Plan
RRMUs	Regional Road Management Units
SDR	Special Drawing Rights
VPRoMMS	Vietnam Provincial Road Maintenance Management System
VRAMP	Vietnam Road Asset Management Project



BASIC DATA

Product Information

Project ID P123961	Financing Instrument Investment Project Financing
Original EA Category Partial Assessment (B)	Current EA Category Partial Assessment (B)
Approval Date 12-Dec-2013	Current Closing Date 31-Dec-2020

Organizations

Borrower The Socialist Republic of Vietnam	Responsible Agency Project Management Unit No. 3 (PMU3)
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Project Development Objective (PDO)

Original PDO

The proposed Project Development Objective (PDO) is to improve the efficiency and sustainability of the national road asset management and maintenance practices performed by the Ministry of Transport on national roads in Vietnam.

Summary Status of Financing (US\$, Millions)

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net		
					Commitment	Disbursed	Undisbursed
IDA-53310	12-Dec-2013	14-Jan-2014	11-Apr-2014	31-Dec-2020	250.00	173.96	55.07
TF-15733	14-Jan-2014	14-Jan-2014	14-Jan-2014	30-Jun-2016	1.05	1.03	0

Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. Project Status



1. A credit in the amount of US\$250.0 million equivalent (SDR 162.6 million) was approved by the Board of Executive Director of the International Development Association (IDA) on December 12, 2013 for the Vietnam Road Asset Management Project (VRAMP). VRAMP was co-financed by an Australian Trust Fund Grant (Grant No. TF015733) in the amount of AUS\$1.7 million (about US\$1.05 million). The Financing Agreement for VRAMP became effective on April 11, 2014 and has a closing date of December 31, 2020. The Grant Agreement became effective on April 11, 2014, and its closing date was June 30, 2016. The Project Development Objective (PDO) is to improve the efficiency and sustainability of the national road asset management and maintenance practices performed by the Ministry of Transport on national roads in Vietnam. The project comprises four components: (A) Road Asset Management System Development (US\$10.0 million); (B) Road Asset Preservation (US\$156.6 million); (C) Road Asset Improvement (US\$133.4 million); and (D) Institutional Strengthening Program (US\$1.7 million). The total project cost is US\$301.7 million, out of which the IDA credit has been used to finance civil work, (ii) consultancy services, and (iii) goods and equipment and counterpart funds have been used to support (i) consultancy and project management cost and (ii) land acquisition cost. The grant was used to finance the consultancy service to develop the integrated framework for national roads asset management. The framework was developed with data and information collected and operationalized for the whole national highway network.

2. By December 2020, US\$173.96 million have been disbursed from the IDA credit (76 percent of the total credit amount). The grant closed on June 30, 2016 with US\$1.03 million disbursed (almost 100 percent of the total grant). Project implementation has progressed well with satisfactory completion of all components as planned. Overall, the project reached completion of 100 percent of contracts of works, goods and services. The Road Asset Management System (RAMS) has been developed and is fully operational, with data collection for the whole national highway network. The Road Asset Preservation Component has completed 100 percent of construction and PBC maintenance contracts with acceptable quality. The Road Asset Improvement Component also completed all road improvements and handed over for operation. The institutional strengthening program was completed too.

3. Progress toward achieving the PDO and project implementation progress are rated Satisfactory. The project complies with the Bank's safeguards and fiduciary policies. There is no integrity or Inspection Panel case related to this project. There are no overdue or outstanding audit issues. The project has also fully complied with World Bank safeguards, procurement, financial management, disbursement policies and legal covenants. During the implementation of the VRAMP, fiduciary and safeguard performance of the project has been consistently rated as Satisfactory and/or Moderately Satisfactory in the ISRs.

B. Project Savings

4. Due to exchange rate fluctuations and the savings from the procurement process, it has been estimated that about US\$55.07 million out of the IDA credit will remain as savings. The Government of Vietnam (GOV) has approved using approximately US\$31.89 million of these savings for three additional activities¹ including i) enhancement of the pavement and

¹ The GoV has completed the internal processing steps to approve the use of approximately US\$31.89m in savings for additional activities. The Prime Minister has issued the Decision No. 1900/QĐ-TTg, dated Dec 4, 2020, on Approval of Investment Policy Adjustment of VRAMP financed by the World Bank. The Decision approves using the project savings for the investment cost of three



intersections of a 7.65km section of National Highway 6 (NH6); (ii) construction of a 19.5 km bypass in Son La city; and (iii) improvement and expansion of 1.39 km of National Highway 2 (NH2). The three activities will complement the highway improvement in the original scope of the project and help scale up the PDO achievement. An extension of the project closing date by 24 months is required to complete these activities. The Ministry of Finance (MOF) sent a letter to the World Bank dated December 25, 2020 requesting an extension of the VRAMP closing date to December 31, 2022, as well an amendment to the Financing Agreement. The GoV and IDA will further discuss on the remaining savings of about US\$ 23.18 million, which may be maybe cancelled at later stage through as separate restructuring.

5. The feasibility studies for the three activities were completed and appraised by the World Bank team. The implementation plan including the procurement and disbursement plan of the proposed activities was developed and cleared by the World Bank. The additional activities will be completed by December 2022.

C. Rationale for Restructuring

6. **The additional activities will contribute further to PDO achievement and project outcomes.** The additional activities will further contribute to achieving the PDO which is to improve the efficiency and sustainability of the road asset management and maintenance practices performed by the Ministry of Transport on national roads in Vietnam. In particular, the proposed activities will utilize the RAMS analysis to support design and management of the additional national highway sections and enhance the overall condition of the national highway network by including more sections with quality and timely maintenance.

7. **Social and economic benefits for the people in project areas will be improved.** The additional activities will improve economic and social benefits for the people in north and northwest regions of Vietnam, especially in Hoa Binh, Son La and Ha Giang provinces as NH2 and NH6 are the two critical corridors for economic and social development of the regions. By enhancing the highway infrastructure in the north and northwest regions of Vietnam, the activities will help remove bottlenecks in the main transport network, improve road safety, and contribute to regional economic growth and inter-provincial economic connectivity and social inclusion. The activities are also in line with provincial master plans on socio-economic development through 2030 with a vision to 2050.

8. **The additional activities will contribute to employment opportunities in the construction industry in the selected regions.** The Covid-19 pandemic has caused new challenges for the economic development and employment market in Vietnam. The slow- down of the economy caused many job losses. The proposed activities will help create new employment opportunities in the construction industry in Vietnam, as all the civil works will follow the national competitive bidding process and be awarded to domestic contractors.

9. **The project efficiency will be maintained with the project extension.** To allow completion of all activities under the project, and more effectively support the implementation of road asset management plan in Vietnam, it is proposed to extend the closing date of the credit by 24 months. With this extension, the additional investment has an economic rate of return (ERR)

activities. The total cost of three activities are estimated as US\$35.72 million of which IDA credit savings will finance US\$31.89 million and counterpart funding will contribute US\$3.83 million.



of 20.33 percent compared to 19 percent of the similar road improvement section under the original project, and a net present value of VND479.07 billion with a discount rate of 12 percent.

10. **The risks are low for implementing the additional activities.** The risks in implementation capacity have been mitigated through an experienced PMU, the engagement of several experienced institutes, and an experienced project management consultant to provide technical support in project implementation. Training has been provided to government officials, contractors and supervision engineers on contract management and site management, as well as on fiduciary and safeguards requirements including for Operational Health Safety. The Bank team will continue the capacity building efforts and provide additional technical support to the PMU as needed. In view of this, the risks for institutional capacity for implementation and sustainability is considered low.

II. DESCRIPTION OF PROPOSED CHANGES

A. Description of Proposed Changes

11. The proposed activities are additional highway sections as part of or bypass for NH6 and NH2 which are two main highways financed by the original scope of the project. The specific activities include: (i) pavement strengthening of 7.65km of NH6, sections Km70+650-Km78+300 and improvement of intersections at starting and ending points of the road section; (ii) construction of a 19.5km bypass in Son La city, Section NH6 Km289+950-Km308+820; and (iii) improvement and expansion of 1.39 km of NH2, section Km284+600-Km286+995. Annex 1 indicates the location map of the three sections. The proposed activities will be implemented as additional activities for both road asset preservation and road asset improvement (component B and C). MOT and PMU 3 will continue managing and implementing the additional activities as the main counterpart agency and implementation unit to utilize their experience and good practice on VRAMP implementation.

12. NH6 (Hanoi - Dien Bien), nearly 500 km long, connecting the Northwest provinces (Hoa Binh, Son La, Dien Bien) to Hanoi capital, is a strategic traffic axis promoting economic development of northwest provinces and international trade through Tay Trang bordergate with Lao PDR as well as serves as a major transport route for major energy projects such as Son La hydropower plant and Lai Chau hydropower plant. NH6 has been facing challenges of deteriorating pavement, severe traffic congestion, and increasing freight traffic demand. Those challenges were partially addressed by government-funded projects and the original scope of the project. To further improve the quality of NH6 infrastructure and service for better connectivity from northwest provinces to Hanoi City as well as to enhance traffic safety, it is critical to implement the proposed activities 1 and 2.

13. The proposed activity 1-strengthening the pavement of NH6 section Km70+650-Km78+300 (7.65 km) will complete the quality highway access from Hoa Binh to Hanoi, which will enhance the overall infrastructure and service quality of NH6, and contribute to better accessibility of people in the Hoa Binh province to economic and employment opportunities in Hanoi. NH6 section connecting Hanoi City to Hoa Binh City (Km 38-Km303), have been mostly upgraded by a government project (improvement of section Km38+000-Km70+650) and under the original scope of VRAMP (improvement of section KM78+300-KM193-100 and section Km 193+000-Km303+000). Currently these sections are open to operation. The only section left for improvement is Km70+650-Km78+300 (Dong Tien ward-Thong Nhat commune, Hoa Binh city). This section has been operated for over ten years and is seriously degraded with many structural defects such as large-scale crocodile fractures, blistering of



pavement on the carriageway lanes, and potholes. The deterioration has increased risks in traffic accidents and congestions, as well as impedes the efficiency of the commuting and logistics.

14. In the territory of Son La province, NH6 is a strategic artery traffic axis, passing the dynamic economic zone of Son La "National Highway No. 6's axial area". The proposed activity 2- construction of the 19.5 km bypass in Son La city, section NH6 Km289+950-Km308+820 will directly address the severe traffic congestion of NH6 sections in Son La, and positively impacts the socio-economic development of Son La province. In recent years, along with the upgrading of Son La town to Son La city and the operation of Son La and Lai Chau hydropower plants, traffic density through Son La city has increased dramatically creating traffic congestion and traffic safety concerns along NH6 sections in the inner city, where the population is concentrated with high density. Son La bypass will remove the through-traffic from the city center to the periphery, reduce congestion in the city, and off-load NH6 for better commuting and logistics efficiency. In addition, the Son La bypass will be mostly located alongside a total of six communes where about six ethnic groups reside, and the economic activities are mostly agroforestry. The Son La bypass will improve the access of rural and mountainous areas to the city and create more business and job opportunities for these ethnic groups.

15. National Highway No.2 is the highway connecting Northern provinces of Vietnam including Ha Giang to Hanoi City and Thanh Thuy border gate which connects to China. This is an important arterial national highway for cultural, economic and trade activities. The proposed activity 3- improvement and expansion of 1.39 km of National Highway 2 (NH2), section Km284+500-Km286+000 will enhance the connectivity of Ha Giang province to Hanoi city and Thanh Thuy border gate. The proposed section is part of the Southern access road to Ha Giang city, which was previously constructed at class 3 (Mountainous) road standard and will be upgraded to urban road standard, to accommodate increasing traffic and improve road safety. This activity will also support the tourism development of UNESCO Dong Van Karst Plateau Geopark nearby and promote international trade activities in Ha Giang province through Thanh Thuy international border gate with China.

16. **Procurement.** The National Competitive Bidding (NCB) procedures specified in the NCB Annex 2 to Schedule 2 in the Financing Agreement refer to those set forth in the Law on Procurement No. 61/2005/QH11 dated November 29, 2005. This Law had been replaced by the Law on Procurement No. 43/2013/QH13 dated November 26, 2013, which is currently applicable. Since all the proposed additional works contracts will be procured using NCB method, the NCB Annex 2 in the Financing Agreement should be updated to correctly refer to the currently applicable national Procurement Law (the Law on Procurement No. 43/2013/QH13) and clearly state the new appropriate changes and modifications that the Bank requires the Borrower to adopt in order to make its NCB procedures as stated in the Law on Procurement No. 43/2013/QH13 acceptable to the Bank. The updated NCB Annex is attached as Annex 2.

17. **Proposed Changes to the Financing Agreement.** The changes proposed by this restructuring will require an amendment to the Financing Agreement to: (a) extend the closing date; (b) introduce appropriate provisions related to the implementation of the Ethnic Minority Development Plans required for the additional activities and provide more specific details about the carrying out of technical assistance or studies under the Project and the safeguards-related content of the bidding documents and contracts for civil works under the Project; and (c) revision of the NCB (as described in para. 16 above).



18. **Project Cost and Financing Plan**². Table 1 and Table 2 show the original project cost as presented in the Project Appraisal Document (PAD), along with the revised project costs as a result of the proposed restructuring. MOT and MOF have shown strong commitment to the project and MOT has embedded the project components in its official plans. GOV has the financial capacity to provide counterpart funding of US\$3.83 million from the fiscal budget for tax of civil work, consultancy for ODA fund using; construction drawing design - cost estimate, preparation of bidding document; appraisal of cost estimate, design, traffic safety; audit and final accounting; civil work insurance, contingency cost, etc.

Table 1: Project Cost and Financing Plan at Appraisal

No	Project Components		Total Cost	IDA		Counterpart funds		Co-financing (AUS Grant)	
			US\$ mil	%	US\$ mil	%	US\$ mil	%	US\$ equiv.
1	A	Road Asset Management System Development	9.33	83%	8.30	0.00%	0	17.00%	1.03
2	B	Road Asset Preservation	156.60	100.00%	156.60	0.00%	0	0.00%	0
3	C	Road Asset Improvement	133.40	62.50%	83.40	37.50%	50	0.00%	0
4	D	Institutional Strengthening Program	1.70	100.00%	1.70	0.00%	0	0.00%	0
		Total	301.30	82.97%	250.00	16.59%	50.00	0.44%	1.03

Table 2: Project Cost and Financing Plan after Restructuring

No	Project Components		Total Cost	IDA		Counterpart funds		Co-financing (AUS Grant)	
			US\$ mil	%	US\$ mil	%	US\$ mil	%	US\$ Equiv.
1	A	Road Asset Management System Development	7.58	86.41%	6.55	0.00%	0	13.59%	1.03
2	B	Road Asset Preservation	144.85	97.51%	141.25	2.49%	3.60	0.00%	0
3	C	Road Asset Improvement	99.08	64.77%	64.17	35.23%	34.91	0.00%	0
4	D	Institutional Strengthening Program	1.04	100.00%	1.04	0.00%	0	0.00%	0
5		Remaining Amount	28.49	59.67%	17.00	40.33%	11.49	0.00%	0
		Total	281.04	81.84%	230.01	17.79%	50.00	0.37%	1.03

Appraisal Summary of Additional Activities

19. **Environmental and Social Safeguards.** The World Bank Environmental and Social Safeguards Policies (OP/BP 4.01, OP/BP 4.04, OP/BP 4.12) have been triggered and complied with under the project. Overall safeguards performance by the

² The VND and USD exchange rates are different at project appraisal and after project restructuring.



latest ISR has been classified as Satisfactory. The additional activities proposed under this project restructuring are expected to be carried out in an existing rural and urban areas, and along existing roads. Implementation of the additional activities will not affect any natural habitats, protected areas, important/threatened flora and fauna species or biodiversity areas of high value. It will not cause degradation or conversion of any known natural habitats or impact any watersheds. Therefore, OP/BP 4.04 is not triggered for the additional activities (though it was triggered for the existing activities). The proposed restructuring involves a Level 2 Restructuring since the project is required to (1) trigger a new safeguards policy (Indigenous Peoples – OP/BP4.10) and implement Ethnic Minority Development Plans (EMDPs) to ensure the Ethnic Minority peoples receive social and economic benefits that are culturally appropriate and gender and intergenerationally inclusive; and (2) update the Integrated Safeguards Data Sheet (ISDS). The OP/BP4.10 is triggered given that the proposed new road sections pass through the areas where there are ethnic minority groups (Thai, Muong, H'Mong, Tay, Nung, San Diu and Dao) both affected by and benefited from this investment. In particular, the bypass in Son La (19.5km) runs through six communes/wards which affects a total number of 731 households, of which ethnic minority people account for more than a half (63 percent). The EM groups present in the project areas have resided for a long time and collectively attached to geographically distinct habitats (rocky-mountains and narrow valleys) in the production and economic development. Their livelihood activities are based mainly on agriculture, cultivation, husbandry and forestry in the form of taking care, protection and exploitation of non-timber forest products (NTFPs). Although these EM groups live intermixed with the dominant Kinh population with similar social and political arrangements, they are also self-identified and well recognized as distinct customary cultural groups. By the national legislations, these EM groups are well recognized as the groups with special attentions paid and various resources invested for further social-cultural-economic development of the EM populations nationwide. The bypass in Son La (19.5km) runs through 6 communes/wards which affects a total number of 731 households, of which the ethnic minority population account for 470 households (63%). While in Hoa Binh and Ha Giang, since the impacts are marginal, the EMs are beneficiaries of the project due to the improvement of the road condition. Each of the participating provinces (Hoa Binh, Son La, and Ha Giang) will prepare, adopt and implement an Ethnic Minority Development Plan (EMDP) to carry out meaningful free, prior and informed consultations with the affected EMs and their communities, to ensure their voices are heard, and to ascertain broad EM community support for project activities.

20. For the proposed activities to be implemented in the sections of NH6 and NH2, given the compensation and assistance activities have already been implemented, two due diligent report (DDRs) for Hoa Binh and Son La were developed accordingly. For the activities in Ha Giang, a Resettlement Plan was prepared. There are 752 households affected by the loss of lands and assets on lands along the ROW, with a total land area to be acquired 55.6ha (Son La NH6 section is 52ha, and Ha Giang NH2 section is 3.6ha). Given the compensation of the section of NH6 in Hoa Binh was fully completed in 2005-2006, there is no households affected by the pavement strengthening. For the construction of section of NH6 in Son La, there are total of 731 household affected, of which 32 households whose main houses are fully affected. All of these households opted for self-relocation as their remaining land is viable for moving backward. For the improvement and expansion of NH2 in Ha Giang, there are total 21 households affected, with a total land to be taken of 3.6ha.

21. Natural Habitats OP/BP 4.04: During project preparation of the parent project it was determined that a 10km section of the existing NH6 runs through the Hang Kia Pa Co Natural Reserve, of which approximately 07 km pass through the buffer zone area and about 03 km pass through the core zone (strict protection area) of the natural reserve, from Km149 to Km152. Therefore, this policy was triggered. However, this policy is not relevant for the additional activities under the project restructuring, as these expected to be carried out in existing rural and urban areas, and along existing roads alignment. Implementation of the additional activities will not affect any natural habitats, protected areas, important/threatened flora and



fauna species or biodiversity areas of high value. It will not cause degradation or conversion of any known natural habitats or impact any watersheds.

22. The project's overall potential social and environmental impacts are the positive impacts as the project is expected to result in: i) improvement of traffic conditions in the project area; ii) increase in the accessibility of local people to neighboring areas; (iii) creation of favorable conditions for the trade and sale of agricultural and forestry products in the project communes/wards; (iv) enhancing tourism development capabilities, exploiting indigenous cultural potentials. The adverse environmental impacts of the three investment items proposed under this restructuring are similar to those already identified, assessed and implemented under the project and include: i) increase of dust, noise, and vibration; ii) pollution risks related to generation of waste and wastewater, especially the large amount of excavation materials; iii) traffic disturbance and increase of traffic safety risks; iv) the risk of erosion and landslides on steep slopes and deep excavation areas as well as potential negative impacts on existing weak structures; v) disturbance to daily socio-economic activities in the project area and social disturbance; vi) health and safety issues relating to community and workers at the construction sites; and vii) the social impacts associated with land acquisition, interruption of business and crop production due to construction-related activities and mobilization of workers to the site. These impacts are temporary and in most cases the mitigation measures are available designed. These have been confirmed by the ESIA and ESMP prepared for this restructuring. Therefore, the proposed project restructuring is still classified as a Category B project.

23. An ESIA has been prepared for the construction of a 19.5 km bypass in Son La province, and two ESMPs have been prepared for the pavement strengthening of 7.65km of NH6 and for the improvement and expansion of 1.39 km of National Highway 2. The ESIA and ESMPs have proposed adequate measures to mitigate the identified impacts and risks together with a monitoring plan. Implementation responsibilities, institutional arrangements, reporting requirements and budgeting have also been included in the ESMPs. The Bank has reviewed the ESIA and ESMPs and found them satisfactory. The ESMPs will be included in the bidding and contractual documents for implementation by the contractor. Implementation of the ESMPs will also be monitored and supervised by PMU3, the construction supervision consultant, the independent environmental monitoring consultant.

24. Ethnic Minority Development Plans (EMDPs) were developed and disclosed publicly. The EMDPs include measures to ensure that (a) the EMs affected by the project receive culturally appropriate social and economic benefits; and (b) adverse effects by loss of lands and assets on land will be compensated for. These EMDPs were reviewed and cleared by the World Bank on December 16, 2020, disclosed in project areas on December 16, 2020, and published on the World Bank's website on December 25, 2020. The ISDS has been updated to reflect these changes.

25. Public consultations with the directly and indirectly affected people and households, local authorities and mass organizations were conducted in the process of preparing the ESIA, ESMPs, RPs, and EMDPs in October 2020. Feedbacks from all the consultations were taken into account in the revised safeguard documents and activity design. Consultation will be continuously conducted during project implementation. Prior to appraisal of the restructuring project, the ESIA, ESMPs, RPs, and EMDPs were disclosed locally in Vietnamese at the project site on December 16, 2020. These safeguard documents in English were also disclosed on December 25, 2020 at the World Bank's external website.



26. The project-wide Grievance Redress Mechanism (GRM) will be maintained in all project provinces based on the existing national GRM already established mechanism embedded in all administrative levels (e.g. one stop shops at the ward and community level, and inspectorates at the district/provincial levels), as well as and the people's courts. Contact focal points are in place at the site in parallel with functioning all-level administrative structure. This mechanism functions well in dealing with issues such as adjudicating land boundaries (at the commune level) or resolving the GBV/ESHS impacts related to construction. The project GRM will build on, and coordinate, these mechanisms to ensure that concerns are captured and addressed in a satisfactorily and timely fashion.

27. **Social safeguards capacity.** The project continues being managed by the Project Management Unit No.3 (PMU3), who has proven experience with the World Bank safeguards policies. The PMU3, under the Directorate for Roads of Vietnam (DRVN) has been well performing various projects using both ODA and national financings. The PMU3 has demonstrated its competence in managing and coordinating all resettlement matters. The PMU3 was adequately trained to manage and supervise the implementation of the World Bank safeguards policies in all project locations and has received ongoing guidance on the implementation of the EMDPs from the World Bank Task team to be fully capable of overseeing all matters related to ethnic minority.

28. **Financial management and disbursement.** For Accounting system and Financial reporting: Circular No 195/2012/TT-BTC (from MOF) has been totally replaced by the new Circular 79/2019/TT-BTC. This has been used as the "current accounting system" for PMU3 (Report No: PAD699, Document of World Bank in 2013, page 23, item 11). In order to meet the Bank FM requirements, changes might be required. Although the WB's Disbursement Guidelines has been updated since 2013 (World Bank Disbursement Guidelines for Investment Project Financing, dated February 2017), the disbursement methods remain unchanged (pages 1-2 of the new Guideline). No modification of the disbursement methods is required.

29. **Technical appraisal.** The technical solutions proposed in the Feasibility Study (FS) of the three activities are technically sound, well aligned with national design standards of the roads and structures and suitable for the terrain conditions. Given the natural disaster and climate risks in the project areas, there are some resilience standards considered in the FS but should be further strengthened in the detailed design. The FS also took into account of traffic safety with effective solutions of intersection design, sight distance clearance in sharp horizontal curves, and principally designed of traffic safety facilities of traffic sign, road marking and side post. With the proper design and implementation of the proposed road works, the road safety and climate resilience of the NH 6 and NH2 will be enhanced. The detailed technical appraisal is indicated in Annex 3.

30. **The economic analysis** of the proposed new activities was carried out in accordance with the World Bank guidelines of *Economic Analysis of Investment Operations* and *Economic Analysis Guidance Note*.³ The proposed activities would bring substantial economic benefits including: (i) savings in passenger and freight travel time; (ii) reduction in vehicle operation cost; and (iii) reduction in vehicle accidents. The new activities have an expected Net Present Value (NPV) of VND 479.07 billion and an expected Economic Rate of Return (ERR) of 20.33 percent, which is higher than the World Bank recommended economic opportunity cost of capital (12 percent). The evaluation was performed using a discount rate of 12 percent, a 30-year evaluation

³ The World Bank. January 1998. *Handbook on Economic Analysis of Investment Operations*. Operational Core Services Network, Learning and Leadership Center. The World Bank. April 9, 2013. *Guidance Note of Economic Analysis for Investment Project Financing*. OPSPQ



period, and an average annual traffic growth rate of 6.0 percent per year for the first ten years, then 3.5 percent thereafter. Sensitivity analysis carried out indicated that the ERRs for the tested cases were higher than 12 percent. Table 3 summarizes the economic benefits of the new activities and more detailed analysis is indicated in Annex 4.

Table 3: Economic Benefits of the New Activities

<i>Criteria</i>	<i>Value</i>
NPV	479.07 (VND billion) ~ 20.77 (\$ million)
ERR (%)	20.33%
Benefit to Cost Ratio (B/C)	1.579

31. **Results Framework (RF).** The RF is proposed to be revised as shown in the Results Framework. The principal changes include the revision of target values for the relevant indicators to reflect the impacts of the additional activities on the intermediate results including i) PBC maintenance implemented under the project (target value increased from 170 km in Dec 2020 to 234 km in Dec 2022); ii) Km of roads maintained under the project with traditional input method (target value increased from 161 km in Dec 2020 to 168.35 km in Dec 2022); and iii) Km of roads improved under the project (target value increased from 56 km in Dec 2020 to 79.9 km in Dec 2022). Detail is annex 5. The RF is set forth in the Project Operations Manual, which will be updated, following the approval of the restructuring

32. **Implementation Plan.** It is expected that the procurement for consultant selection for detailed design, cost estimate, and bidding document will be carried out from January to April 2021. Procurement for selection of civil work contractor will be carried out from May 2021 to August-September 2021 and the procurement for selection of supervision consultant will be carried out from January to July 2021. The civil work construction will be implemented from August 2021 to December 2022.

33. **Disbursement Estimates.** The disbursement of IDA savings is estimated to reach 15 percent by 2021, 65 percent by 2022 and 100 percent by 2023. Table 4 present the disbursement estimates.

Table 4: Expected Disbursement of IDA Savings

Expected Disbursements (in USD Million) – Project’s original plan and savings									
Fiscal year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Annual	12.00	50.00	40.00	43.00	15.00	38.00	4.50	3.50	23.89
Cumulative	12.00	62.00	103.00	146.00	162.00	200.00	204.50	208.00	231.89

**III. SUMMARY OF CHANGES**

	Changed	Not Changed
Results Framework	✓	
Loan Closing Date(s)	✓	
Overall Risk Rating	✓	
Safeguard Policies Triggered	✓	
Legal Covenants	✓	
Implementation Schedule	✓	
Economic and Financial Analysis	✓	
Technical Analysis	✓	
Social Analysis	✓	
Environmental Analysis	✓	
Implementing Agency		✓
DDO Status		✓
Project's Development Objectives		✓
PBCs		✓
Components and Cost		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Disbursement Estimates		✓
EA category		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Other Change(s)		✓

IV. DETAILED CHANGE(S)



LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-53310	Effective	31-Dec-2020		31-Dec-2022	30-Apr-2023
TF-15733	Closed	30-Jun-2016	28-Dec-2016		

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating at Approval	Current Rating
Political and Governance		● Moderate
Macroeconomic		● Moderate
Sector Strategies and Policies		● Moderate
Technical Design of Project or Program		● Moderate
Institutional Capacity for Implementation and Sustainability		● Moderate
Fiduciary		● Moderate
Environment and Social		● Moderate
Stakeholders		● Moderate
Other		● Moderate
Overall		● Moderate

COMPLIANCE

Safeguard Policies

Safeguard Policies Triggered	Current	Proposed
Environmental Assessment (OP) (BP 4.01)	Yes	Yes
Performance Standards for Private Sector Activities OP/BP 4.03	No	No
Natural Habitats (OP) (BP 4.04)	Yes	Yes
Forests (OP) (BP 4.36)	No	No
Pest Management (OP 4.09)	No	No



Physical Cultural Resources (OP) (BP 4.11)	No	No
Indigenous Peoples (OP) (BP 4.10)	No	Yes
Involuntary Resettlement (OP) (BP 4.12)	Yes	Yes
Safety of Dams (OP) (BP 4.37)	No	No
Projects on International Waterways (OP) (BP 7.50)	No	No
Projects in Disputed Areas (OP) (BP 7.60)	No	No

LEGAL COVENANTS

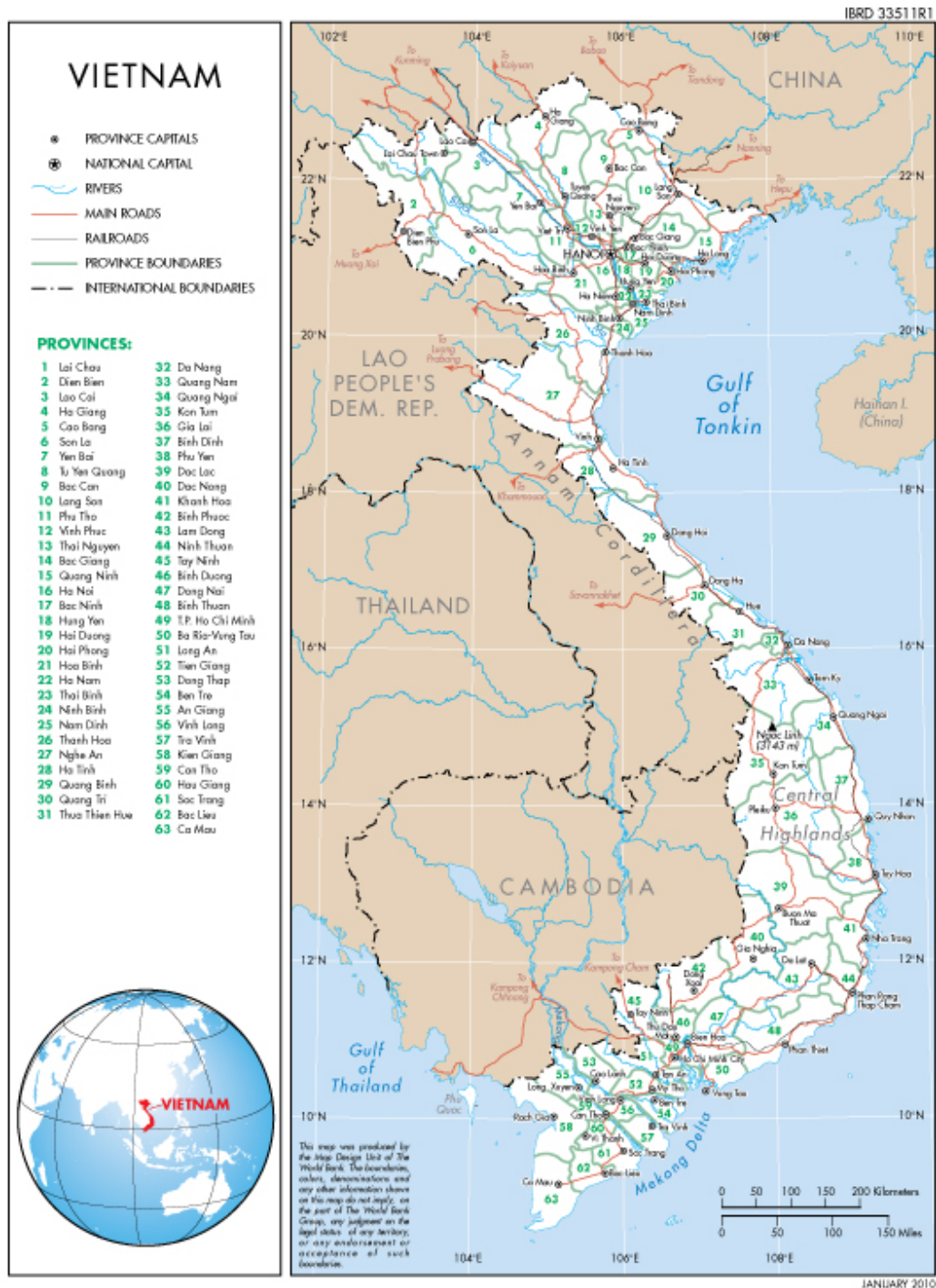
Loan/Credit/TF	Description	Status	Action
IDA-53310	Finance Agreement :Section 1 of Schedule 2 Description :The Recipient shall maintain the implementation arrangements as described in Section 1 of Schedule 2 to the Financing Agreement. Frequency :CONTINUOUS	Complied with	No Change
IDA-53310	The Recipient shall ensure, that all terms of reference for any technical assistance or studies carried out under the Project are consistent with, and pay due attention to, the Association’s Safeguards Policies.	Not yet due	New
IDA-53310	The Recipient shall implement in a timely manner the Environmental Management Plans and the Ethnic Minority Development Plans, all acceptable to the Association.	Not yet due	New
IDA-53310	The Recipient shall ensure that all bidding documents and contracts for civil works under the Project include the obligation of contractors, subcontractors and supervising entities as set forth under paragraph 8 of Section IV.D of Schedule 2 to the Financing Agreement.	Not yet due	New



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
<i>Action: This indicator has been Revised</i>									
Component B: Road Asset Preservation									
PBC maintenance implemented under the project (Kilometers)		0.00	50.00	124.00	234.00	170.00	170.00	170.00	170.00
Km of roads maintained under the project with traditional input method (Kilometers)		0.00	161.00	120.00	161.00	161.00	161.00	161.00	168.50
<i>Action: This indicator has been Revised</i>	<p>Rationale: <i>Traditional maintenance was implemented from 2015 and completed in 2016: NH48 (length of 46km: km0–km20 and km38–km64) and NH6 (length of 114.7 km: km78+300–km193). It is planned to use the project savings to maintain NH6 section Km70–km78 with length of 7.65 km. Total km of roads to be maintained under the project with traditional input method will be about 168.35 km.</i></p>								
Component C: Road Asset Improvement									
Km of roads improved under the project (Kilometers)		0.00	30.00	40.00	56.00	79.90			108.50
<i>Action: This indicator has been Revised</i>	<p>Rationale: <i>Package CP1: Improvement of Trang Thua and Cong Neo bridges on NH38B and Package CP1A: Improvement of Trang, Cap bridges on NH38B and Go bridge on NH39: completed with total length is about 7 km. Package CP14: Improvement of Nh39 (Km91+000–Km107+522) section Vo Hoi – Diem Dien: completed with total length is about 12.71 km. Package CP13: Improvement of NH39 (Km42+714–Km64+000) section Trieu Duong – Hung Ha and 02 briges: Nai and Dong Tu: completed with total length is about 19.07 km. Package CP12: Improvement of NH38 (section Quan Goi – Yen Lenh bridge km33+960–Km52+600) : completed with length of about 20.86 km . It is planned to use the project savings to invest in Son La city bypass, NH6 section Km289+950–Km308+820 with length of 18.87 km and NH2 section Km284+600–Km285+995 with length of 1.39 km. Total km of roads to be improved under the project with traditional input method will be about 79.90 km.</i></p>								



Annex 1:
Vietnam map





Annex 2 : Procurement Analysis

PROPOSED UPDATED NCB ANNEX

ANNEX to SCHEDULE 2

National Competitive Bidding Procedures

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) Article 20 on Open Bidding of the Recipient's Law on Procurement No. 43/2013/QH13 dated November 26, 2013 and related provisions necessary to effect the same; and (b) the Recipient's Decree No. 63/2014/ND-CP dated June 26, 2014 Guiding Implementation of the Law on the Procurement (collectively, "National Procurement Laws"), subject to the provisions of Section I and Paragraphs 3.3 and 3.4 of the "Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers" dated January 2011 ("the Procurement Guidelines") and the following provisions:

Conflict of Interest

1. A bidder shall not have a conflict of interest. Any bidder found to have a conflict of interest shall be ineligible for award of a contract. The provisions on conflict of interest as stated under Section I of the Procurement Guidelines shall apply.

Eligibility

2. The eligibility of bidders shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder shall be declared ineligible for contracts financed by the Association for reasons other than those provided in Section I of the Guidelines. Foreign bidders shall be eligible to participate in bidding under the same conditions as national bidders. In particular, no domestic preference over foreign bidders shall be granted to national bidders in bid evaluation, nor shall foreign bidders be asked or required to form joint ventures with or be subcontractors to national bidders in order to submit a bid.

3. Government-owned enterprises or institutions of the Recipient's country are eligible to bid in the Recipient's country only if they can establish that they: (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not dependent agencies of the Recipient or Sub-Borrower.

Time for Bid Preparation

4. 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.

Standard Bidding Documents

5. The standard bidding documents acceptable to the Association shall be used.



Bid Opening and Bid Evaluation

6. Bids shall be opened in public, immediately after the deadline for submission of bids, regardless of the number of bids received.
7. Evaluation of bids shall be made in strict adherence to the criteria that shall be clearly specified in the bidding documents and quantified in monetary terms for evaluation criteria other than price; merit points shall not be used in bid evaluation. No bid shall be eliminated from detailed evaluation on the basis of minor, non-substantive deviations. The evaluation of bidder's qualifications shall be conducted separately sub-sequent to the technical and commercial evaluation of the bid.
8. A contract shall be awarded, within the period of the validity of bids, to the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (i) to be substantially responsive to the bidding documents and (ii) to offer the lowest evaluated cost. A bidder shall neither be required nor permitted, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify the bid as originally submitted.
9. No bid shall be rejected on the basis of a comparison with the employer's estimate and budget ceiling without the Association's prior written agreement.

Rejection of All Bids and Re-bidding

10. Rejection of all bids is justified when there is lack of effective competition, or all bids are not substantially responsive, or no bidder meets the specified qualification criteria, or the bid price of the lowest evaluated winning bid is substantially higher than the Recipient's updated estimated cost or available budget. All bids shall not be rejected or new bids solicited without the Association's prior written agreement.

Complaints by Bidders and Handling of Complaints

11. The Recipient shall implement an effective and independent complaints mechanism, acceptable to the Association, allowing bidders to complaint and have their complaints handled in a timely manner.



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										A											period + grace period						
B. Works										7	29,539																
9	RAP/CP 18	Son La city bypass, NH6 section Km289+950-Km293+500 Length: 3,55 km	C 1	W	NCB e-bidding	1	4,462	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Nov-22					
									R																		
									A																		
10	RAP/CP 18	Son La city bypass, NH6 section Km293+500-Km297+500 Length: 4 km	C 1	W	NCB e-bidding	1	5,028	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Nov-22					
									R																		
									A																		
11	RAP/CP 19	Son La city bypass, NH6 section Km297+500-Km301+500 Length: 4 km	C 1	W	NCB e-bidding	1	5,028	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Nov-22					
									R																		
									A																		
12	RAP/CP 20	Son La city bypass, NH6 section Km301+500-Km305+500 Length: 4 km	C 1	W	NCB e-bidding	1	5,028	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Nov-22					
									R																		
									A																		
13	RAP/CP 20	Son La city bypass, NH6 section Km305+500-Km308+820 Length: 3.32 km	C 1	W	NCB e-bidding	1	4,176	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Nov-22					
									R																		
									A																		
14	RAP/CP 21	NH2 section Km284+600 - Km285+995	C 1	W	NCB e-bidding	1	4,016	Post	P	Apr-21	May-21	May-21	N/A	Jun-21	N/A	N/A	Jul-21	N/A	N/A	Sep-21	Oct-21	Sep-22					
									R																		
									A																		
15	RAI/CP 22	NH6 section Km70+650-Km78+300	C 1	W	NCB e-bidding	1	1,801	Post	P	Apr-21	Apr-21	May-21	N/A	May-21	N/A	N/A	Jul-21	N/A	N/A	Aug-21	Sep-21	Aug-22					



Annex 2.3 –Implementation Plan (Disbursement)

No.	Contract code	Component and Contract description		Type	Procurement method	No. contracts	Estimated value (excluded tax) (x\$1000)	Est. Disbursement			
								31-Dec-21	30-Jun-22	31-Dec-22	30-Apr-23
1	2	3	4	5	6	7	8	31-Dec-21	30-Jun-22	31-Dec-22	30-Apr-23
A. Consulting Services						3	1,005				
1	RAI/CS10	Supervision of civil work contracts (#2)	B5	CS	QCBS (nationally advertised)	1	835	125	167	251	292
2	RAI/CS11	Social & Environmental Monitoring (#2)	C3	CS	CQS	1	120	18	24	36	42
3	RAI/CS12	External Financial Audit (#3)	C4	CS	CQS	1	50			25	25
B. Works						7	30,885				
9	RAP/CP18	Son La city bypass, NH6 section Km289+950-Km293+500 Length: 3,55 km	C1	W	NCB e-bidding	1	4,800	720	960	1,440	1,680
10	RAP/CP18	Son La city bypass, NH6 section Km293+500-	C1	W	NCB e-bidding	1	5,100	765	1,020	1,530	1,785



		Km297+500 Length: 4 km										
11	RAP/CP19	Son La city bypass, NH6 section Km297+500- Km301+500 Length: 4 km	C1	W	NCB e-bidding	1	5,100	765	1,020	1,530	1,785	
12	RAP/CP20	Son La city bypass, NH6 section Km301+500- Km305+500 Length: 4 km	C1	W	NCB e-bidding	1	5,100	765	1,020	1,530	1,785	
13	RAP/CP20	Son La city bypass, NH6 section Km305+500- Km308+820 Length: 3.32 km	C1	W	NCB e-bidding	1	4,500	675	900	1,350	1,575	
14	RAP/CP21	NH2 section Km284+600 - Km285+995	C1	W	NCB e-bidding	1	4,485	673	897	1,346	1,570	
15	RAI/CP22	NH6 section Km70+650- Km78+300 (Hoa Binh)	C1	W	NCB e-bidding	1	1,800	270	360	540	630	
		Total					31,890	4,776	6,368	9,577	11,169	



Annex 3: Technical Appraisal

1. For all the sub-projects, especially for the new construction road of Son La city by pass of NH6, technical solution was flexibly applied for geometric design by sections with limited geometric condition of sharper horizontal curve radius and steeper longitudinal slope compared with the corresponding parameters follows the road standard. These solutions are for being consistent with hardly terrain condition and for natural based resilience. However, it is necessary for solutions of traffic calming and sufficient facilities for the limited geometric condition sections included transition parts of these sections. The solutions need to be clear in detailed design period.
2. It is mentioned in the revised FS report for pavement design of new construction and pavement strengthening were calculated and analyzed follows current local flexible pavement design and based on traffic condition and the pavement structures of adjacent section roads on NH6 and NH2 corresponding of the sub-project. The result is minimum modulus of pavement follows road class were selected for the road sub-project. Pavement structure, especially for the new construction sub-project of Son La city by-pass, needs be checked and analyzed using axle loading data estimated from traffic survey. It is noted that commercial vehicles, particularly all trucks and heavy trucks, will take the bypass road. This work must be done at detailed design period.
3. The existing drainage system on strengthening road of NH6 and NH2 were assessed for sufficiency of capacity and structural condition. Technical solutions of maintaining existing culverts, increasing flow capacity of culverts, and adding side drain section based on the assessment. For detailed design, the assessment should be individually implemented for each drainage structure considering climate change adaption. It was mentioned in the revised FS report for hydrological analysis for the drainage structures on the new road construction projects of Son La city bypass on NH6. However, climate changes condition and technical solutions for climate adaption was not clearly in the revised FS report. It should be considered for detailed technical solutions for drainage structure calculation and analysis at hydrologic aspects for providing sufficient capacity of drainage structures (of bridges, culverts and drains) to adapt climate conditions.
4. Retaining walls were proposed at the sections where are potentially land sliding in the new construction road sub-project of Son La bypass. Concrete gravity retailing wall was proposed for cutting road slope stability and soil reinforcing retaining wall were proposed for filling cut slope stability. Investigation for the risks of land sliding individually at each section must be done follows technical guideline of climate vulnerability assessment for final technical solutions. Comprehensive technical solutions combining surcharge slope reduction, bio-engineering, drainage with structures such as gravity concrete wall must be considered for a sustainable and climate adaptable technical solution. For 02 other sub-projects of road improvement, it is necessary for assessment of roadbed stability at sections for sufficient technical solutions. At detailed design stage, all 03 proposed sub-projects must be assessed for climate vulnerability for other risky climate, i.e. flooding and flush flood in the areas along the road sections for the appropriate technical solutions.
5. Traffic safety was taken account in the revised FS with effective solutions of intersection design, sight distance clearance in sharp horizontal curves, and principally designed of traffic safety facilities of traffic sign, road marking and side post, etc. follows current road safety standard. It is noted for traffic safety individually audited and designed at location and section. Cross-roads must be included for not only pavement taping, but also for traffic safety design. At the cross-road location, beside conventional design of traffic signs and road marking, longitudinal slope of the crossing roads and sight distance must be checked for appropriate technical solutions. Long enough homogenous section at traffic safety aspects for speed control must be ensured for safely and conveniently movement of all vehicles of the



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traffic flow. All the mentioned notifications need be implemented at detailed design stage. There is a need to detail the climate change adaptation measures where appropriate in the technical designs, particularly for drainage and earthwork protection. The location and extent of adaptation measures should be informed by Climate Vulnerability Assessments surveys and designed in detail accordingly.



Annex 4: Economic analysis

1. Taking a combination of three proposed activities as a single project, the results of the economic evaluation, including the ERR value of 20.33 percent, and the NPV of 479.07 (VND billion), is presented in table 4:

Table 4. Economic benefits are the benefits that society gains from the project's fulfilling of overall socio-economic goals.

Criteria	Value
NPV	479.07 (VND billion) ~ 20.77 (\$ million)
ERR (%)	20.33%
Benefit to Cost Ratio (B/C)	1.579

2. Besides, the annual cash flows of the additional projects (considered as one single project) are shown in Table 5. The discount rate is taken as 12 percent for the calculation. The construction costs are estimated at 85 percent of the total costs, excluding the management fees, consultancy expense, and unforeseen costs/expenses.

Table 5. Summary of Economic Costs and Benefit flows

Year	Eq. Year	Cost (VND million)			Benefits (VND million)					Total	NPV
		Costs	M&O costs	Total costs	TDC	VOC savings	Time savings	Total benefits	TDB		
2020	-3			,000	,000					,000	
2021	-2			,000	,000					,000	
2022	-1			,000	,000					,000	,000
2023	1	676,093	4,024	680,116	607,247	- 10.318	103.043	92.724	82.790	- 587.392	- 524.457
2024	2		4,265	4,265	3,400	- 12.863	110.215	97.353	77.609	93.087	- 450.248
2025	3		4,521	4,521	3,218	- 13.448	117.699	104.251	74.204	99.730	- 379.262
2026	4		4,792	4,792	3,046	- 14.033	125.528	111.495	70.857	106.703	- 311.451
2027	5		5,080	5,080	2,882	- 14.619	133.728	119.110	67.586	114.030	- 246.747
2028	6		48,260	48,260	24,450	- 15.204	142.327	127.124	64.405	78.863	- 206.792
2029	7		5,708	5,708	2,582	- 15.789	151.355	135.566	61.323	129.859	- 148.051
2030	8		6,050	6,050	2,444	- 16.374	160.845	144.470	58.349	138.420	- 92.145
2031	9		6,413	6,413	2,313	- 16.959	170.830	153.870	55.487	147.457	- 38.970
2032	10		6,798	6,798	2,189	- 17.545	181.348	163.803	52.740	157.005	11.581
2033	11		64,583	64,583	18,566	- 18.130	192.440	174.310	50.110	109.727	43.125
2034	12		7,638	7,638	1,960	- 18.715	204.147	185.432	47.596	177.794	88.760
2035	13		8,096	8,096	1,855	- 19.300	216.518	197.217	45.197	189.121	132.102
2036	14		8,582	8,582	1,756	- 19.886	229.600	209.715	42.912	201.133	173.258
2037	15		9,097	9,097	1,662	- 20.471	243.449	222.978	40.737	213.881	212.333
2038	16		711,749	711,749	116,102	- 21.056	258.120	237.064	38.670	- 474.685	134.901
2039	17		10,221	10,221	1,489	- 21.641	273.677	252.036	36.708	241.814	170.120



2040	18	10,835	10,835	1,409	- 22.226	290.185	267.958	34.845	257.124	203.557
2041	19	11,485	11,485	1,333	- 22.812	307.715	284.903	33.079	273.419	235.302
2042	20	12,174	12,174	1,262	- 23.397	326.344	302.948	31.406	290.774	265.446
2043	21	115,658	115,658	10,705	- 23.982	346.155	322.173	29.820	206.515	284.561
2044	22	13,679	13,679	1,130	- 24.567	367.236	342.669	28.319	328.990	311.749
2045	23	14,499	14,499	1,070	- 25.152	389.682	364.530	26.898	350.030	337.577
2046	24	15,369	15,369	1,013	- 25.738	413.595	387.858	25.553	372.488	362.118
2047	25	16,291	16,291	0,958	- 26.323	439.085	412.762	24.280	396.471	385.440
2048	26	154,777	154,777	8,129	- 26.908	466.270	439.362	23.076	284.585	400.386
2049	27	18,305	18,305	0,858	- 27.493	495.276	467.783	21.936	449.478	421.464
2050	28	19,403	19,403	0,812	- 24.871	526.127	501.256	20.987	481.853	441.639
2051	29	20,568	20,568	0,769	- 25.410	559.192	533.782	19.955	513.215	460.824
2052	30	21,802	21,802	0,728	- 25.949	594.519	568.570	18.978	546.768	479.074

* Eq. = Equivalent ; VOC=Vehicle operating cost; M&O=Maintenance and Operation costs; TDB=Total discounted benefits; TDC=Total discounted cost

3. In addition, a sensitivity analysis is performed to evaluate the change of ERR regarding the changes in different affecting factors. Changes in the benefit and cost streams, taking into account various scenarios are shown in Table 6:

Table 6. Sensitivity Analysis

Scenarios	ERR (percent)
1. Base case	20.33
2. Costs increase by 20 percent	17.19
3. VOC decreases by 20 percent	19.84
4. Base traffic decreases by 20 percent	15.64
5. Combination of 2 and 3	16.80

4. The sensitivity analysis shows that the ERR is more sensitive to base-year traffic, and traffic changes, following by the costs. In the severe case when the base traffic decreases by 20 percent, the ERR remains at 15.64 percent, which remains a reasonable ERR value. Risk analysis shows that the likelihood of the project not reaching an ERR of 12 percent is less than 1 percent. From the above results of the evaluation criteria, it is demonstrated that the project is economically effective. Investment in the Project will bring significant benefit to the society and community, and is strategic in the socio-economic development of the studied areas.



Annex 5: Results Framework

Project Development Objective Indicators

► Annual and mid-term (3 years) plans for priority and implementation of national road network maintenance and long-term (10 years) maintenance strategy generated by RAMS (Yes/No, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	N	Y	Y
Date	31-Oct-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend
Comment on this Indicator (optional):

► Improved financing of road maintenance measured by the increased maintenance financing covered by the RMF (Percentage, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	70.00	100.00	100.00
Date	31-Oct-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend
Comment on this Indicator (optional)
Base year demand is US\$ 360 million.

► Expansion of PBC program in national road maintenance (Kilometers, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	0.00	17,000.00	17,000.00



Date	31-Oct-2013	31-Dec-2020	31-Dec-2022
Comments			

Overall Comments

Intermediate Results Indicators

► Annual condition measurement for national road network (Kilometers, Custom)			
	Baseline	End Target (2020)	End Target (2022)
Value	0.00	17,748.00	17,748.00
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022
Hide Comments Target, M&E Plan Trend			
Comment on this Indicator (optional)			
► PBC maintenance implemented under the project (Kilometers, Custom)			
	Baseline	End Target (2020)	End Target (2022)
Value	0.00	170.00	234.00
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022
Hide Comments Target, M&E Plan Trend			
Comment on this Indicator (optional)			
Sections of NH2 (km163-Km287) with total length of 124 km are being maintained under PBC method from 2015. Sections of NH6 (Km193-Km303) with length of 110 km are being maintained under PBC method from 2016. These contracts under VRAMP will last for 5 years for NH2 and 4 years for NH6			



► **Km of roads maintained under the project with traditional input method (Kilometers, Custom)**

	Baseline	End Target (2020)	End Target (2022)
Value	0.00	161	168.35
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend

Comment on this Indicator (optional)

Traditional maintenance was implemented from 2015 and completed in 2016: NH48 (length of 46km: km0–km20 and km38-km64) and NH6 (length of 114.7 km: km78+300-km193). It is planned to use the project savings to maintain NH6 section Km70-km78 with length of 7.65 km. Total km of roads to be maintained under the project with traditional input method will be about 168.35 km.

► **Km of roads improved under the project (Kilometers, Custom)**

	Baseline	End Target (2020)	End Target (2022)
Value	0.00	56	79.90
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend

Comment on this Indicator (optional)

Package CP1: Improvement of Trang Thua and Cong Neo bridges on NH38B and Package CP1A: Improvement of Trang, Cap bridges on NH38B and Go bridge on NH39: completed with total length is about 7 km. Package CP14: Improvement of Nh39 (Km91+000-Km107+522) section Vo Hoi – Diem Dien: completed with total length is about 12.71 km. Package CP13: Improvement of NH39 (Km42+714-Km64+000) section Trieu Duong – Hung Ha and 02 briges: Nai and Dong Tu: completed with total length is about 19.07 km. Package CP12: Improvement of NH38 (section Quan Goi – Yen Lenh bridge km33+960-Km52+600) : completed with length of about 20.86 km . It is planned to use the project savings to invest in Son La city bypass, NH6 section Km289+950-Km308+820 with length of 18.87 km and NH2 section Km284+600-Km285+995 with length of 1.39 km. Total km of roads to be improved under the project with traditional input method will be about 79.90 km.



► Annual audit of Road Maintenance Fund published and available for civil society (Yes/No, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	N	Y	Y
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend
Comment on this Indicator (optional)



► Roads in good and fair condition as a share of total classified roads (Percentage, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	70.00	72.00	72.72
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

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Comment on this Indicator (optional)

Based on the Intermediate results of Component Two – Road Asset Preservation, 168.35 km road to be maintained under traditional maintenance contracts, and 234 km road has been rehabilitated under PBC maintenance contracts, 79.90 km road to be improved under improvement contracts. In total, 482.25 km will be traditionally maintained/rehabilitated/improved under the Project. Thus, roads in good and fair condition as a share of total road network due to the project will increase from 70% to 72.72% (total number of km road to be traditionally maintained/rehabilitated/improved under VRAMP /total number of km national roads = 482.25/17,748 km =2.72%).

► Percentage of affected households having woman attended consultation activities on compensation/resettlement (Percentage, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	N/A	80%	80%
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

Hide Comments Target, M&E Plan Trend

Comment on this Indicator (optional)

► Semi-annual Project Monitoring and Evaluation Report will be submitted to the Bank (Number, Custom)

	Baseline	End Target (2020)	End Target (2022)
Value	0.00	14.00	18.00
Date	20-Sep-2013	31-Dec-2020	31-Dec-2022

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Comment on this Indicator (optional)



The World Bank

Vietnam Road Asset Management Project (P123961)

Overall Comments