



Report and Recommendation of the President to the Board of Directors

Project Number: 49377-001
September 2016

Proposed Loan India: Madhya Pradesh District Roads II Sector Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 11 August 2016)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	\$0.01498
\$1.00	=	Rs66.7693

ABBREVIATIONS

ADB	–	Asian Development Bank
CSC	–	construction supervision consultant
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
km	–	kilometer
LIBOR	–	London interbank offered rate
MDR	–	major district road
MPRDC	–	Madhya Pradesh Road Development Corporation
PAM	–	project administration manual

NOTES

- (i) The fiscal year (FY) of the Government of India and its agencies ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2016 begins on 1 April 2015 and ends on 31 March 2016.
- (ii) In this report, “\$” refers to US dollars.

Vice-President	W. Zhang, Operations 1
Director General	H. Kim, South Asia Department (SARD)
Director	H. Yamaguchi, Transport and Communications Division, SARD
Team leader	R. Peri, Principal Transport Specialist, SARD
Team members	A. Bajaj, Senior Project Officer (Transport), SARD K. Emzita, Principal Counsel, Office of the General Counsel J. Georget, Transport Specialist, SARD K. Yangzom, Environmental Specialist, SARD K. Yeo, Transport Specialist, SARD S. Zhao, Social Development Specialist, SARD
Peer reviewer	M. Nishimura, Transport Specialist, East Asia Department

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CONTENTS

	Page
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Rationale	1
B. Impact and Outcome	3
C. Outputs	3
D. Investment and Financing Plans	3
E. Implementation Arrangements	4
III. DUE DILIGENCE	5
A. Technical	5
B. Economic and Financial	6
C. Governance	7
D. Poverty and Social	7
E. Safeguards	8
F. Risks and Mitigating Measures	10
IV. ASSURANCES	10
V. RECOMMENDATION	10
APPENDIXES	
1. Design and Monitoring Framework	11
2. List of Linked Documents	13

PROJECT AT A GLANCE

1. Basic Data		Project Number: 49377-001	
Project Name	Madhya Pradesh District Roads II Sector Project	Department /Division	SARD/SATC
Country	India	Executing Agency	Public Works Department, Government of Madhya Pradesh
Borrower	India		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Road transport (non-urban)		300.00
	Transport policies and institutional development		50.00
		Total	350.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	9.80
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Private sector development (PSD)	Public sector goods and services essential for private sector development	Some gender elements (SGE)	✓
5. Poverty Targeting		Location Impact	
Project directly targets poverty	No	Rural	High
		Urban	Low
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: B Involuntary Resettlement: B Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		350.00	
Sovereign Project loan: Ordinary capital resources		350.00	
Cofinancing		0.00	
None		0.00	
Counterpart		150.00	
Government		150.00	
Total		500.00	
9. Effective Development Cooperation			
Use of country procurement systems		No	
Use of country public financial management systems		Yes	

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to India for the Madhya Pradesh District Roads II Sector Project.¹

2. The project will improve about 1,500 kilometers (km) of major district roads (MDRs) in the state of Madhya Pradesh, in line with the state's road development plan for 2013–2033.² It will involve upgrading MDRs to an intermediate lane width of 5.5 meters, or two lane widths of 7 meters, depending on traffic requirements; reconstruction, widening, and strengthening culverts and bridges; and maintaining the improved road assets for 5 years after construction. The project will also develop and introduce a cashless accident victim treatment facility in the state, and improve the accident response system.

II. THE PROJECT

A. Rationale

3. **State context.** The present boundaries of the state of Madhya Pradesh were reconstituted in November 2000 after its division to create the state of Chhattisgarh. It is still the second-largest state in the country, with an area of about 308,000 square kilometers and a population of about 73 million.³ Madhya Pradesh is among the poorer states in the country with per capita income at about 70% of the national average.⁴ However, its gross state domestic product grew at a compound annual rate of about 8.4% during FY2005–FY2015. The gross state domestic product per capita increased at an average annual rate of 6.9% during the same period, fostered by a series of developments. These include the Pithampur–Dhar–Mhow region as a key node on the Delhi–Mumbai Industrial Corridor, as well as many industrial areas and industrial growth centers. However, agriculture still underpins the state's economy and about 70% of the people live in rural areas. Because industrial development and agricultural production are dispersed, the road network is a vital element of the economic infrastructure.

4. **Road network.** The state has a road network of about 127,000 km, of which about 4,700 km are national highways, 11,000 km are state highways, and 20,000 km are MDRs. Rural roads make up the balance of the road network. The number of annually registered vehicles in the state has increased at an average annual rate of 9.7% since 2003 to reach about 8.8 million in 2013.⁵ The Madhya Pradesh Road Development Corporation (MPRDC) estimated that annual vehicular growth in 2011–2021 will exceed 7%.⁶ Average daily traffic has been increasing commensurately with vehicle ownership. The government estimated that more than \$1.2 billion will be needed in 2013–2023 to meet the state's investment requirements for roads.⁷

5. **Road development program.** The state is close to completing its program to upgrade the entire state highway network through a combination of budgetary allocations, Asian Development Bank (ADB) support through three previous loans, and public–private

¹ The design and monitoring framework is in Appendix 1.

² MDRs form the third tier of the state road network, after national highways and state highways.

³ Government of India. 2011. *Census Data 2011*. Delhi.

⁴ Government of India. Open Government Data Platform India. www.data.gov.in. (accessed 24 April 2016).

⁵ Ministry of Road Transport and Highways, 2014. *Road Transport Yearbook (2012–2013)*. Delhi.

⁶ Madhya Pradesh Road Development Corporation. 2013. *Development Plan for State Roads in Madhya Pradesh 2013–2033*. Bhopal.

⁷ Sector Assessment (Summary): Transport (Nonurban Road Transport) (accessible from the list of linked documents in Appendix 2).

partnerships.⁸ However, MDRs have received marginal attention, and major portions of them still need to be upgraded. The Government of Madhya Pradesh has made improvements of MDRs an essential part of upgrading the state road core network, which is being carried out through the proposed plan in Table 1. ADB approved one previous loan for MDR improvements.⁹

Table 1: Proposed Improvement Plan for Major District Roads

Major District Roads in Madhya Pradesh	Length (Kilometers)
Under construction by MPPWD	3,107
Recently completed or under construction by MPRDC	3,184
In good condition	4,679
Proposed under this project	1,500
Proposed for New Development Bank	1,500
Balance to be constructed through other means	5,459
Total	19,429

MPPWD = Madhya Pradesh Public Works Department; MPRDC = Madhya Pradesh Road Development Corporation.

Source: MPRDC.

6. **Project basis.** Madhya Pradesh has a high incidence of poverty and needs substantial investments to meet its developmental needs. MDRs are a key link in the road network between rural roads and the state highways. Continued development of this network will foster inclusiveness by giving more of the state's population easier access to markets and basic services. ADB has assisted the state government with three previous loans to improve state highways and one loan for MDRs, and ADB's loans to the central line ministry have also been used for rural roads in the state.¹⁰ ADB's assistance to the state's road sector has provided an opportunity for ADB to build institutional capacity of MPRDC, as well as to participate in, and substantially complete, the development of all tiers of the state road network. Through this project, ADB will help complete the state-wide road improvement program, stabilize and deepen institutional capacity, and improve road safety and accident response initiatives. The project is consistent with the strategic objectives in ADB's country partnership strategy for India to develop the state core road network, focus on lagging states, and (in the transport sector) increase the movement of people and goods.¹¹ The project is included in the country operations business plan, 2016–2018, for India.¹²

7. **Modality.** Sector lending¹³ is well suited for this project because (i) the project covers a number of MDRs distributed across the state; (ii) Madhya Pradesh has a sector development

⁸ ADB. 2002. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to India for the Madhya Pradesh State Roads Sector Development Program*. Manila (Loans 1958 and 1959); ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to India for the Madhya Pradesh State Roads Sector Project II*. Manila (Loan 2330); and ADB. 2011. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to India for the Madhya Pradesh State Roads Project III*. Manila (Loan 2736).

⁹ ADB. 2014. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to India for the Madhya Pradesh District Connectivity Sector Project*. Manila.

¹⁰ Funds for rural roads are through ADB's loans to the central line ministry, parts of which are deployed in Madhya Pradesh.

¹¹ ADB. 2013. *Country Partnership Strategy: India. 2013–2017*. Manila.

¹² ADB. 2015. *Country Operations Business Plan: India. 2016–2018*. Manila.

¹³ ADB. 2003. *Sector Lending. Operations Manual*. OM D3/BP. Manila.

plan in place (footnote 6); and (iii) the state has the institutional capacity to prepare and implement the sector plan, and to prepare the individual road packages. MPRDC, set up under an ADB technical assistance project (footnote 8), is crucial to this capacity. Incorporated in 2004, MPRDC was designated as a highway authority under the state's highway legislation to develop state highways, MDRs, and other infrastructure. The chief minister of Madhya Pradesh is chair of the MPRDC board; the minister for the state's Public Works Department and the chief secretary of the state are the vice-chairs. MPRDC has developed a strong managerial and technical team headed by its managing director, who is a senior officer of the government. MPRDC has substantive project implementation experience from previous ADB loans. Under the sector loan, the approval of non-sample road subprojects will be based on satisfactory technical, economic, social, and environmental assessments.¹⁴ MPRDC and ADB will agree on the eligibility criteria, which will be based on the respective criteria set out for the sample roads.

B. Impact and Outcome

8. The impact will be improved mobility and accessibility, which is aligned with the government's Twelfth Five Year Plan.¹⁵ The outcome will be improved road transport efficiency and safety in Madhya Pradesh.

C. Outputs

9. The project outputs will be the following:
- (i) **Major district roads reconstructed and rehabilitated.** About 1,400–1,500 km of MDRs, designed to all-weather standards and road safety, will be reconstructed and rehabilitated. The roads will be constructed with concrete pavements which will improve asset life and maintainability. The construction contracts will include 5-year, performance-based maintenance obligations, which will also improve the quality of assets created as the contractors will need to keep in view the extended risk liability.
 - (ii) **Cashless accident victim treatment facility implemented.** The facility will be a group insurance product that enables the treatment of road accident victims in proximate hospitals. This facility will be available in nonurban areas, initially in 3–4 districts of the state, with insurance premiums being paid using ADB financing.
 - (iii) **Accident response system improved.** Hardware and networking improvements to the existing accident response system will be upgraded to increase the capacity and reach of the system, and enhance interfacing with other services. While Madhya Pradesh was one of the first states in India to establish such a system and provide links to ambulances throughout the state, the current initiative will mainstream these systems.

D. Investment and Financing Plans

10. The project is estimated to cost \$500 million (Table 2). Detailed cost estimates by financier and by year are in the project administration manual (PAM).¹⁶

¹⁴ Non-sample roads under the sector lending modality are those that are not prepared by MPRDC and appraised in detail by ADB at the time of loan approval, but which will be prepared later by MPRDC and approved by ADB as per agreed frameworks.

¹⁵ Government of India, Planning Commission. 2013. *Twelfth Five Year Plan, 2012–2017*. Delhi (Volumes 1–3). <http://planningcommission.gov.in/plans/planrel/12thplan/welcome.html>

¹⁶ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

Table 2: Project Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost ^b	
1. Reconstruction and rehabilitation of major district roads	432.00
2. Cashless accident victim treatment facility	8.00
3. Improvement of accident response system	2.00
Subtotal (A)	442.00
B. Contingencies ^c	43.00
C. Financing Charges During Implementation ^d	15.00
Total (A+B+C)	500.00

^a This includes taxes and duties of about \$23 million to be financed from government resources by cash contribution and the Asian Development Bank (ADB). The amount of taxes and duties to be financed by ADB (i) are within the reasonable threshold identified during the country partnership strategy preparation process, (ii) represent only 5% of the investment plan, and (iii) apply only to ADB-financed expenditures. The financing of the taxes and duties is considered material and relevant to the success of the project.

^b In December 2015 prices.

^c Physical contingencies computed at 5.0% for civil works, price contingencies at 1.5% of foreign exchange costs, and 5.5% of local currency costs.

^d Includes interest and commitment charges. Interest during construction for the ADB loan is computed at the 5-year fixed swap rates plus a spread of 0.5% and maturity premium of 0.1%. Commitment charges for an ADB loan are 0.15% per year on the undisbursed loan amount.

Source: Asian Development Bank estimates.

11. The Government of India has requested a loan of \$350,000,000 from ADB's ordinary capital resources to help finance the project. The loan will have a 25-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 loan agreement and project agreement. The government has requested the straight-line repayment option. Based on these loan terms and this repayment option, the average loan maturity is 15.25 years and the maturity premium payable to ADB is 0.10% per year.¹⁷

12. The financing plan is in Table 3. The ADB loan will finance 70% of the project cost. The State Government of Madhya Pradesh has allocated counterpart financing for 30% of the cost.

Table 3: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (loan)	350	70
Government (State Government of Madhya Pradesh)	150	30
Total	500	100

Sources: State Government of Madhya Pradesh and Asian Development Bank estimates.

E. Implementation Arrangements

13. The executing agency for the project will be the Public Works Department, Government of Madhya Pradesh, acting through MPRDC. MPRDC will be responsible for day-to-day project implementation and management through its field offices at key locations, and will assign staff to work on the project. One or two full-time project managers will be assigned for each contract package, with delegated technical and administrative authority for expeditious project

¹⁷ The loan terms are subject to confirmation by the Government of India.

implementation. MPRDC will engage construction supervision consultants (CSCs) as the engineers for the construction contracts. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines (2015, as amended from time to time). All consultants will be recruited according to ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).

14. The implementation arrangements are summarized in Table 4 and described in detail in the PAM (footnote 16).

Table 4: Implementation Arrangements

Aspects	Arrangements		
Implementation period	November 2016–September 2020		
Estimated completion date	30 September 2020 (loan closing date: 31 March 2021)		
Management			
(i) Executing agency	Public Works Department, Government of Madhya Pradesh, acting through MPRDC		
(ii) Implementation units	10 project implementation units of MPRDC at Seoni, Gwalior (2), Indore, Jabalpur, Rewa (2), Sagar, Ujjain, and Shahdol. Each unit is headed by a divisional manager, with support staff. A total of 28 full-time staff will be assigned to the project, plus oversight and control from MPRDC headquarters at Bhopal.		
Procurement	International competitive bidding	20 contracts	\$10,000,000–\$40,000,000 each
Consulting services	Quality- and cost-based selection; full technical proposal	About 5,500 person-months	\$14,000,000 (total, in four packages)
Retroactive financing and/or advance contracting	Works, equipment, and consulting services		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed upon between the Government of India and ADB.		

MPRDC = Madhya Pradesh Road Development Corporation.

Source: Asian Development Bank.

15. During project preparation, MPRDC's preparation activities for the sample roads were well advanced. Based on ADB's approval of advance contracting of civil works in December 2015, the Government of India requested retroactive financing for all project components. Up to 20% of the amount of the loan proceeds (\$70 million) will be eligible for retroactive financing, provided that expenditures are incurred on works, equipment, and consulting services for the project during the 12 months before the signing of the loan and project agreements. These expenditures should follow agreed procedures, including ADB approval of contract-specific environmental management plans (EMPs). The Government of India, Government of Madhya Pradesh, and MPRDC have been informed that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

III. DUE DILIGENCE

A. Technical

16. The project was prepared with the enhanced capacity MPRDC gained through the four previous ADB loans and technical assistance (footnotes 8 and 9). MPRDC's consultants prepared detailed design documents for the roads proposed for ADB financing, incorporating ADB requirements of economic, social, and environmental studies into the consultants' terms of reference. ADB engaged individual consultants to conduct an economic assessment and due diligence on environmental and social safeguards to ensure that the consultants' work complies with ADB requirements. The engineering design was prepared to avoid land acquisition,

minimize social and environmental impacts, incorporate road safety, and mitigate climate change risks. In addition, advance actions were taken to ensure that construction can start early. These measures to improve project readiness will facilitate faster project implementation.

B. Economic and Financial

17. The economic evaluation of the project followed the standard practice of comparing life cycle costs with and without the project, using the net present value with a 12% discount rate and the economic internal rate of return (EIRR) as decision criteria. The economic analysis was conducted with the highway development model 4, which estimates road agency costs and road user costs to assess the economic viability of project roads using input data on traffic, road geometry, pavement structure, condition and material characteristics of the existing road, maintenance and road improvement costs, and vehicle operating costs. The value added from improved transport links, resulting in new industries and employment, are captured through benefits from generated traffic.

18. The economic analysis was conducted for nine sample MDRs totaling 238 km. The EIRR for the nine project roads averaged 17.3%, ranging from 13.0% for the Harfari–Khaira–Misirgawan Road to 23.5% for the Dharna–Asta–Dondiwada–Dharmakua Road. Overall, sample roads have an EIRR that satisfies the economic viability criteria of 12%. The sensitivity of the EIRR for the sample project roads together was analyzed with respect to changes in the benefit and cost streams. The following sensitivity cases were examined: (i) construction costs increased by 10%, (ii) vehicle operating cost and travel time savings reduced by 10%, (iii) construction costs increased by 10% and vehicle operating cost and travel time savings reduced by 10%, (iv) a 2-year delay in road construction, (v) road maintenance costs increased by 100% in the project case, and (vi) value of time decreased by 20%. The results highlight the robust economic viability of the sample roads in all sensitivity tests. All selected roads have an EIRR above 12% in all sensitivity tests, except for the Harfari–Khaira–Misirgawan Road under scenario (iii) for which the EIRR is 11.3%. The traffic growth rate in rural Madhya Pradesh is likely to significantly exceed the normal traffic growth scenario considered because of generated traffic and conservative growth assumptions. In addition to quantified benefits of maintenance savings, vehicle operating costs savings, and time savings, the project road improvements will also accelerate the economic growth of the rural areas of the state, which otherwise suffer from poor connectivity. The population connected through project roads will benefit from easier access to social, health, and education facilities.¹⁸

19. **Financial sustainability.** The state Public Works Department's budget allocation for maintenance doubled from FY2010 to FY2015, and is expected to grow in line with the state's gross domestic product. Current allocations for maintenance cover about 80% of the requirements, including the project incremental recurrent costs. The State Road Development Plan has introduced measures to improve the financial sustainability of the road network. MPRDC is separately piloting an operate–maintain–transfer system, with a concession period of 7–10 years, to provide some toll revenue to support road maintenance. For the project roads, the use of concrete pavements and inclusion of maintenance element for 5 years from completion of construction will improve asset construction quality as well as maintenance.

¹⁸ Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

C. Governance

20. **Institutional capacity.** The executing agency, MPRDC, is wholly owned by the State Government of Madhya Pradesh. Its board includes the highest levels of political and administrative officers in the state. MPRDC has been the implementing agency for four previous ADB loans and is familiar with ADB procedures and has strong institutional capacity. In addition to its headquarters in Bhopal, MPRDC has many divisional offices across the state and also manages many public–private partnership projects.

21. **Financial management.** An assessment of MPRDC’s accounting systems, financial reporting, and external audit procedures, has concluded that MPRDC has adequate capacity in project financial accounting and ADB disbursement procedures because of its significant experience with ADB-funded projects. MPRDC follows double-entry, accrual-based accounting and prepares financial statements in accordance with the accounting standards of India. MPRDC will maintain separate project accounts and records by funding source for all expenditures incurred on the project. Project accounts will follow accounting principles and practices prescribed by the accounting laws and regulations of the Government of India. An internal audit is carried out by a firm of chartered accountants appointed by MPRDC. An external audit is conducted by independent auditors from the panel appointed by the comptroller and auditor general in accordance with auditing standards issued by the Government of India. The overall financial management risk is assessed as *low*.¹⁹

22. **Procurement.** MPRDC has extensive experience in procurement and consultant recruitment for ADB projects, as well as in the use of various forms of public–private partnership for road projects. Goods and works will be procured according to ADB’s Procurement Guidelines (2015, as amended from time to time). All civil works will be procured through international competitive bidding. All consulting firms will be recruited in accordance with ADB’s Guidelines on the Use of Consultants (2013, as amended from time to time) using quality- and cost-based selection, with a quality–cost ratio of 80:20 as agreed with the Government. Procurement actions for 18 works contracts packages are already ongoing; the remaining packages will be bid out by the fourth quarter of 2016. Recruitment of the supervision consultants for the three construction supervision consultant packages has begun and shortlisting was completed as part of advance action. The procurement plan for the project is in the PAM.²⁰

23. **Anticorruption.** ADB’s Anticorruption Policy (1998, as amended to date) was explained to and discussed with the Government of India and MPRDC. Specific policy requirements and supplementary measures are described in the PAM.

D. Poverty and Social

24. Madhya Pradesh is one of the less developed states with a human development index of 0.375, which is below the national average.²¹ Agriculture is the main sector in the local economy. A social impact assessment involving 1,926 households found that poor road conditions were preventing safe and reliable travel, especially during the rainy season. Better roads will increase new economic and job opportunities by improving links to commercial facilities. Rural

¹⁹ Financial Management Assessment Report (accessible from the list of linked documents in Appendix 2).

²⁰ Procurement Capacity Assessment Report (accessible from the list of linked documents in Appendix 2).

²¹ Government of India, Planning Commission. 2011. *India Human Development Report (Towards Social Inclusion)*. Delhi. Comparative data for 2008 for India is 0.467.

communities will benefit by having faster and more reliable transport of their produce to markets and by receiving higher profit margins. Access to public and social service facilities (such as government agencies, health centers, and schools) will also be enhanced. Project beneficiaries include local residents, road users, businesses, commercial services, and government workers. The project roads cover 19 districts in the state where about 30.1 million people live. The bidding documents include provisions for the civil works contracts to comply with core labor standards. Details are in the summary poverty reduction and social strategy.²²

25. **Gender.** During the social study, 21 focus group discussions were held with women only. The discussions revealed that women are not actively engaged in family and community decision-making processes. Women indicated that poor road conditions were preventing safe and reliable travel. Improved road conditions are expected to provide better access to health services, higher levels of education, and social interactions, as well as better public and private transport options. Gender-sensitive features include (i) integrating safety and other features for the elderly, women, children, and people with disabilities into road design, such as well-marked crossings, raised pedestrian walkways, hard shoulders, soft shoulders, or covered drains depending on the available right-of-way and local needs; (ii) giving preference to local women and vulnerable households for road maintenance jobs during the 5-year maintenance period, which is estimated to generate about 136 person-years of employment, and ensuring that provisions for equal wages for equal work by male and female skilled and unskilled labor in project works are in the bidding documents; (iii) providing training to all maintenance workers; (iv) collecting sex-disaggregated data and pedestrian data for the cashless accident victim treatment facility being developed; and (v) collecting sex-disaggregated data and improving public awareness targeting rural communities for the accident response system.

26. **HIV/AIDS.** Adult HIV prevalence in India was 0.27% in 2011. New infections declined by 57% from 2000 to 2011, and AIDS-related deaths dropped by 29% from 2007 to 2011.²³ According to India's National AIDS Control Organisation, HIV infection is typically concentrated among the poor and marginalized groups (including such high-risk groups as sex workers, drug users, migrant laborers, and truck drivers). Madhya Pradesh is a low-prevalence state. Based on the poverty and social assessment, the project will not increase HIV/AIDS incidence as all improved roads will be along the existing corridor. Contractors will carry out HIV/AIDS awareness for laborers at work sites, monitored by the CSCs.

E. Safeguards

27. **Environmental impact.** The project is categorized B for the environment, according to ADB's Safeguard Policy Statement (2009). The scope of work under the sample subprojects involves improvement and maintenance of existing MDRs. Adequate rights-of-way is available for all the sample subprojects, and no significant, long-term, or irreversible environmental impacts are expected. A consolidated initial environmental examination report, with contract package-specific EMPs, has been prepared for the nine sample subprojects and will be disclosed on the ADB website. For the sector project, an environmental assessment and review framework has been prepared to guide compliance with environment safeguard requirements under the acts and policies of the Government of India and ADB's Safeguard Policy Statement. No category A subprojects will be financed under the project. Anticipated environmental impacts during construction of the sample subprojects entail typical issues related to road construction,

²² Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

²³ Government of India, Ministry of Health and Family Welfare. 2011. *National AIDS Control Organisation Annual Report 2011*. Delhi.

such as generation of dust, noise, exhaust, waste from construction and worker camps, water contamination, occupational health and safety, erosion, and siltation. Potential operational impacts such as noise, pollution, and safety issues caused by increased traffic are expected to be insignificant. Mitigation measures to address all construction- and operation-related impacts have been included in the contract package-specific EMPs. The EMPs will form part of the bidding documents and be mandatory for implementation by the contractor. Consultations have been conducted with stakeholders and affected persons, during the project preparation stage, and their concerns have been incorporated in the initial environmental examination and EMP. A grievance redress mechanism has been established to continue receiving feedback and complaints, if any, from affected parties and addressing them during construction and operation.

28. One environment safeguards officer will be assigned at the MPRDC and another one will be recruited to support this officer. During implementation, each of the 10 project implementation units of MPRDC will have an environment safeguard focal person. During inception and preconstruction, ADB and the CSC will conduct initial workshops for MPRDC staff, other CSC staff, and the contractors. Additional training will be conducted during construction as necessary.

29. **Involuntary resettlement.** The project is categorized B for resettlement, according to ADB's Safeguard Policy Statement. The project uses the most feasible technical design to avoid land acquisition and involuntary resettlement. Roads will be improved within the existing right-of-way. The sample subprojects are representative of the kinds of impact likely to be encountered in non-sample roads. Stakeholders and affected persons were consulted during preparation of the sample subprojects, and project information was disclosed. A resettlement plan has been prepared for the nine households that will experience temporary impacts to their livelihoods, during construction, on three of the sample subprojects. A due diligence report has been prepared for the remaining six sample subprojects to verify that there will be no impact. For the sector project, a resettlement framework has been prepared in accordance with the acts and policies of the Government of India and ADB's Safeguard Policy Statement. The framework will guide the screening and planning for all subsequent subprojects. Displaced persons will be compensated at replacement cost (rates for different categories of loss and special assistance are in the framework). If any changes, additional land requirements, or involuntary resettlement impacts are identified during implementation, a resettlement plan will be prepared or updated. ADB's prior approval will be obtained before further implementation of the relevant section of the subproject. MPRDC has implemented five ADB projects since 2002 (footnotes 8 and 9). One dedicated staff in MPRDC will oversee the project; each of MPRDC's 10 project implementation units will have a social safeguard focal person. During inception and preconstruction, ADB and the CSC will conduct initial workshops for MPRDC staff, other CSC staff, and the contractors. Additional training will be conducted during the construction stage as necessary.

30. **Indigenous people.** The project is categorized C for indigenous people, according to ADB's Safeguard Policy Statement. Madhya Pradesh has a significant tribal population, which constitutes more than one-fifth of its total population. The state is home to 46 "scheduled tribes."²⁴ The tribal population is largely concentrated in and around the forest area. All project roads will be improved within the existing alignment and no new roads are being constructed. The poverty and social assessment survey confirmed that the socioeconomic impacts will not differ between tribal groups and nontribal groups. No category A subprojects will be financed

²⁴ Tribes or tribal communities recognized under the Constitution of India through applicable legislation.

under the project. An indigenous peoples planning framework has been prepared to guide screening of the impact of non-sample subprojects.

F. Risks and Mitigating Measures

31. Major risks and mitigating measures are summarized in Table 5 and described in detail in the risk assessment and risk management plan.²⁵ The assessment indicates that the overall risk is low considering the mitigation measures, and the integrated benefits and impacts are expected to outweigh the costs.

Table 5: Summary Risks and Mitigating Measures

Risks	Mitigating Measures
Initial delays in project implementation	MPRDC has prepared the detailed design for the nine sample roads and has completed safeguard-related surveys and reviews. Detailed project reports for the non-sample roads were completed by August 2016. For sample roads, consultant recruitment for construction supervision is in progress. Procurement for works contracts started in June 2016. Project designs have been prepared to avoid land acquisition. However, because of the large number of non-sample roads, the risk after mitigation is still medium.
Inadequate quality checking and monitoring	Engineers and construction supervision consultants will be engaged for quality checks in accordance with contracts. ADB will undertake frequent review missions to ensure timely undertaking and implementing quality of contracts. Ten project implementation units are envisaged, distributed around the state near work sites. These units will be supported by three firms of construction supervision consultants. The introduction of 5-year, performance-based maintenance in works contracts will increase contractor accountability for construction quality. Despite these steps, quality control and checking will be best addressed by field staff. This is the first time that concrete pavements are being used on this scale on district roads. As the roads are dispersed geographically throughout the state, the level of risk after mitigation is still medium.

ADB = Asian Development Bank, MPRDC = Madhya Pradesh Road Development Corporation.

Source: Asian Development Bank.

IV. ASSURANCES

32. The Government of India, the State Government of Madhya Pradesh, and MPRDC have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement, as described in detail in the PAM and loan documents. The national and state governments and the MPRDC have agreed with ADB on certain covenants for the project, which are set forth in the loan and project agreements.

V. RECOMMENDATION

33. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$350,000,000 to India for the Madhya Pradesh District Roads II Sector Project, from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao
President

5 September 2016

²⁵ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

DESIGN AND MONITORING FRAMEWORK

Impact the Project is aligned with:
 Mobility and accessibility improved (Twelfth Five Year Plan)^a

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p>Outcome</p> <p>Road transport efficiency and safety in Madhya Pradesh improved</p>	<p>By 2021</p> <p>a. Movement of people and goods on rehabilitated roads measured by AADT increased to 82,000 (2014 baseline: 44,000 vehicles)</p> <p>b. Average travel time on the project roads reduced by 20% (2014 baseline: 1.75 minutes per km)</p> <p>c. Vehicle operating cost (economic) on the project roads reduced by 20% (2015 baseline: Rs9.60 per km for cars and Rs27.00 for medium trucks)</p>	<p>a-c. Post-implementation measurement endorsed by MPPWD</p>	<p>Severe economic reversals are encountered in the state.</p>
<p>Outputs</p> <p>1. Major district roads reconstructed and rehabilitated</p>	<p>By 2020</p> <p>1a. About 1,400–1,500 km of MDRs reconstructed and rehabilitated to all-weather standards with road safety and EWCD-friendly features at appropriate locations^b</p> <p>1b. MDRs placed under 5-year, performance-based maintenance contracts</p>	<p>1a-1b. Post implementation progress report endorsed by MPPWD</p>	<p>Major turnover in key MPRDC staff during implementation</p>
<p>2. Cashless accident victim treatment facility implemented</p>	<p>By 2020</p> <p>2a. A cashless accident victim treatment facility made operational in 3-4 districts of the state</p>	<p>2a. Post implementation progress report endorsed by MPPWD</p>	
<p>3. Accident response system improved</p>	<p>By 2020</p> <p>3a. Existing accident response system upgraded</p> <p>3b. Monitoring system for accident type and sex-disaggregated data established</p>	<p>3a-3b. Post implementation progress report endorsed by MPPWD</p>	

<p>Key Activities with Milestones</p> <p>1. Major district roads reconstructed and rehabilitated</p> <p>1.1 Award and mobilize construction supervision consultants by Q4 2016.</p> <p>1.2 Award contracts for reconstruction and rehabilitation of about 1,400–1,500 km of roads starting from Q4 2016, and complete construction by Q3 2020.</p> <p>1.3 Conduct post-implementation measurement of indicators by MPRDC by Q4 2021.</p> <p>2. Cashless accident victim treatment facility implemented</p> <p>2.1 Structure, develop, and introduce the facility by Q3 2018.</p> <p>2.2 Implement appropriate initial scheme in conjunction with an insurance company and selected hospitals by Q3 2020.</p> <p>3. Accident response system improved</p> <p>Start improvement of system hardware by Q3 2017 and complete by Q4 2018.</p> <p>Project Management Activities</p> <p>Project implementation units established by Q3 2016.</p> <p>Resettlement plan activities completed by Q3 2016.</p> <p>Counterpart funds available by Q3 2016.</p>
<p>Inputs</p> <p>ADB: \$350 million (loan)</p> <p>Government: \$150 million</p>
<p>Assumptions for Partner Financing</p> <p>Not Applicable</p>

AADT = annual average daily traffic; EWCD = elderly, women, children, and disabled; km = kilometer; MDR = major district road; MPPWD = Madhya Pradesh Public Works Department; MPRDC = Madhya Pradesh Road Development Corporation, Q = quarter.

^a Government of India, Planning Commission. 2013. *Twelfth Five Year Plan, 2012–2017 Economic Sectors Volume II*. Delhi. <http://planningcommission.gov.in/plans/planrel/12thplan/welcome.html>

^b EWCD features include well-marked crossings, safety signage, and pedestrian walkways.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=49377-001-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Transport (Nonurban Road Transport)
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Economic and Financial Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Initial Environmental Examination
11. Environmental Assessment and Review Framework
12. Resettlement Plan
13. Resettlement Framework
14. Indigenous Peoples Planning Framework
15. Risk Assessment and Risk Management Plan

Supplementary Documents

16. Social Safeguard Due Diligence Report
17. Project Climate Risk Assessment
18. Previous ADB Projects with Madhya Pradesh Road Development Corporation
19. Financial Management Assessment Report
20. Procurement Capacity Assessment Report