



# Report and Recommendation of the President to the Board of Directors

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Project Number: 43574-025  
March 2016

## Proposed Loan India: Uttar Pradesh Major District Roads Improvement Project

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Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 11 March 2016)

Currency unit – Indian rupee/s (Re/Rs)

Re1.00 = \$0.0148

\$1.00 = Rs67.3020

## ABBREVIATIONS

ADB	–	Asian Development Bank
CRN	–	core road network
DPR	–	detailed project report
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
GOUP	–	Government of Uttar Pradesh
IEE	–	initial environmental examination
km	–	kilometer
LIBOR	–	London interbank offered rate
MDR	–	major district road
PAM	–	project administration manual
PIU	–	project implementation unit
UPPWD	–	Public Works Department of the Government of Uttar Pradesh

## 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.

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## PROJECT AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 43574-025	
<b>Project Name</b>	Uttar Pradesh Major District Roads Improvement Project	<b>Department /Division</b>	SARD/SATC
<b>Country Borrower</b>	India	<b>Executing Agency</b>	Public Works Department, Government of Uttar Pradesh
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
✓ <b>Transport</b>	Road transport (non-urban)		300.00
		<b>Total</b>	<b>300.00</b>
<b>3. Strategic Agenda</b>	<b>Subcomponents</b>	<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	12.50
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium
<b>4. Drivers of Change</b>	<b>Components</b>	<b>Gender Equity and Mainstreaming</b>	
Private sector development (PSD)	Public sector goods and services essential for private sector development	Some gender elements (SGE)	✓
<b>5. Poverty Targeting</b>		<b>Location Impact</b>	
Project directly targets poverty	No	Rural	High
<b>6. Risk Categorization:</b>	Complex		
<b>7. Safeguard Categorization</b>	Environment: B Involuntary Resettlement: A Indigenous Peoples: C		
<b>8. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>300.00</b>	
Sovereign Project loan: Ordinary capital resources		300.00	
<b>Cofinancing</b>		<b>0.00</b>	
None		0.00	
<b>Counterpart</b>		<b>128.00</b>	
Government		128.00	
<b>Total</b>		<b>428.00</b>	
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems		Yes	
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 Uttar Pradesh Major District Roads Improvement Project.<sup>1</sup>

2. The project will improve about 430 kilometers (km) of major district roads (MDRs) in the state of Uttar Pradesh, in line with the Strategic Core Road Network Master Plan for Uttar Pradesh. It will involve upgrading of MDRs depending on traffic requirements; reconstruction, widening, and strengthening of culverts and bridges; and maintenance of the improved road assets for 5 years after construction.<sup>2</sup> The project will also conduct a road safety audit of the MDRs on the core road network (CRN) and initiate remedial measures at identified critical locations.

## II. THE PROJECT

### A. Rationale

3. Despite accounting for just 7% of India's geographic area, Uttar Pradesh is home to about 200 million, or 16% of the national population, making it the country's most populous state. It is also amongst the poorer states in the country. Although Uttar Pradesh contributes about 8.5% to the country's gross domestic product, its per capita income is less than half the national average. Uttar Pradesh also has the largest rural population in the country. Almost 80% of its population lives in rural areas, where agriculture is the main economic activity and contributes 46% to the state's income. Given the dispersed nature of industrial development, the road network is a critical economic infrastructure. Uttar Pradesh's total road network is about 300,000 km, and the road density per 100,000 people is 104 km against a national average of 142 km. About 40% of its road network is rated poor to very poor, and only 13% is rated good. About 58% of this network has road width of less than 5.5 meters and barely 5% is wider than two lanes. If appropriate road capacity metrics are used, only 35% of national highways and 60% of state highways have comfortable capacity utilization, while the rest need capacity augmentation such as widening.<sup>3</sup>

4. To address the problems of road connectivity and capacity in the state, the Public Works Department of the Government of Uttar Pradesh (UPPWD) engaged reputable national consulting firms to provide inputs for a study on the Strategic Core Road Network Master Plan. In addition to preparing a vision statement and master plan, the study aimed to (i) identify the CRN and the requirements to upgrade it; (ii) establish the requirements to augment and improve state highways, MDRs, and other district roads; (iii) plan the connectivity to all habitations by all-weather roads; and (iv) prepare an implementation and financing plan to achieve the above targets, including an assessment of potential private sector participation. The CRN study of UPPWD estimates a total investment of \$16 billion spread over four phases from 2014 to 2031 (the horizon year for the plan). This investment rate of \$1 billion per year is proposed to be met mainly through a combination of government budget (about 60%), public-private partnership

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> The Asian Development Bank (ADB) provided project preparatory technical assistance for Preparing the Uttar Pradesh Major District Roads Investment Program (TA 8427) for \$700,000.

<sup>3</sup> Government of India. 2011. *Census of India*. Delhi; United Nations Development Programme. 2012. *Uttar Pradesh: Economic and Human Development Indicators*. [http://www.undp.org/content/dam/india/docs/uttar\\_pradesh\\_factsheet.pdf](http://www.undp.org/content/dam/india/docs/uttar_pradesh_factsheet.pdf); and Government of Uttar Pradesh, Public Works Department, World Bank Division. 2014. *Preparation of Strategic Core Road Network - Master Plan for Uttar Pradesh*. Lucknow.

(about 30%), and multilateral borrowing (about 10%). A sector assessment summary is in Appendix 2.

5. The Government of Uttar Pradesh (GOUP) has requested ADB's financial assistance for addressing improvements to MDRs. This will be ADB's first road sector assistance to the state.<sup>4</sup> MDRs form the key linkage between rural roads and state highways, connect peri-urban and urban areas, and have to be developed to complete state road connectivity. Developing this network will foster inclusiveness by enabling larger segments of the state's population to better access markets and basic services. This is aligned with the objective of ADB's transport sector interventions in India—to increase the movement of people and goods in a safer and more efficient and sustainable manner. The project involves (i) rehabilitating and upgrading about 430 km of MDRs; (ii) improving road maintenance and asset management; and (iii) conducting a road safety audit of MDRs in the CRN, and implementing remedial measures. UPPWD consultants have prepared detailed project reports (DPRs) for eight road subprojects, and ADB has provided project preparatory technical assistance to review and supplement the DPRs.

6. **Sustainable maintenance.** To ensure better construction quality and improved maintenance of the road assets after construction, the project will include a 5-year performance-based maintenance period included in the construction contract. This will transfer part of the construction quality risk and maintenance risk to the private sector, and yield better value for money to the users.

7. **Road safety.** According to the Ministry of Road Transport and Highways report of 2013, the country's road safety record is not very good, although it has shown signs of improvement since 2010.<sup>5</sup> Uttar Pradesh has one of the poorest road accident records among the states, and has the country's seventh-highest number of accidents of registered vehicles. It also has the highest proportion of fatal accidents in the country, with over 11% in 2013. In this context, Uttar Pradesh became one of the first states in the country to establish a road safety policy in 2014. Established in partnership with the World Bank and the Government of New Zealand, the policy covers (i) building awareness of road safety, (ii) strengthening institutional arrangements, (iii) establishing a road safety database, (iv) ensuring safer road infrastructure, (v) promoting safer vehicles, (vi) training drivers for safety, (vii) enforcing traffic laws, and (viii) providing emergency medical assistance to accident victims. Projects under consideration by the World Bank and ADB will facilitate UPPWD's actions to improve road safety. The road safety policy of the state is in Supplementary Appendix C.<sup>6</sup>

## B. Impact and Outcome

8. The impact will be improved mobility and accessibility, aligned with the Twelfth Five-Year Plan of the Government of India.<sup>7</sup> The outcome will be improved efficiency and safety of the core road network in Uttar Pradesh.

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<sup>4</sup> In parallel, the World Bank is appraising a \$400 million loan to the Government of Uttar Pradesh for the Core Road Network Development Project, which aims to improve state highways.

<sup>5</sup> Government of India, Ministry of Road Transport and Highways. 2013. *Road Accidents in India*. Delhi.

<sup>6</sup> World Bank. 2015. *Project Information Document (PID) for the Appraisal Stage of the Uttar Pradesh Core Road Network Development Program*. Washington, DC.

<sup>7</sup> Government of India, Planning Commission. *Twelfth Five-Year Plan, 2012–2017*. Delhi.

## C. Outputs

9. The project outputs will be (i) MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated; (ii) road maintenance and asset management improved; and (iii) road safety of MDRs in the CRN audited and safety features installed. About 430 km of MDRs will be reconstructed and rehabilitated to two-lane width of 7 meters. The roads will be designed for all-weather use and with road safety features. The construction contracts will include 5-year performance-based maintenance obligations to ensure better asset quality and improved maintenance. A road safety audit will be carried out for all MDRs in the CRN, and appropriate and cost-efficient measures will be implemented to address accident-prone spots.

## D. Investment and Financing Plans

10. The project is estimated to cost \$428,000,000 (Table 1). Detailed cost estimates by expenditure category and financier are in the project administration manual (PAM).<sup>8</sup>

**Table 1: Project Investment Plan**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Rehabilitation of roads	361.00
2. Road maintenance	13.00
3. Road safety	11.00
<b>Subtotal (A)</b>	<b>385.00</b>
<b>B. Contingencies<sup>c</sup></b>	<b>27.00</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>16.00</b>
<b>Total (A + B + C)</b>	<b>428.00</b>

ADB = Asian Development Bank, CPS = country partnership strategy.

<sup>a</sup> This includes taxes and duties of about \$20 million to be financed from government resources by cash contribution and ADB. The amount of taxes and duties to be financed by ADB are (i) within the reasonable threshold identified during the CPS preparation process; (ii) represent only 5% of the investment plan; and (iii) apply only to ADB-financed expenditures. The financing of taxes and duties is considered material and relevant to the success of the project.

<sup>b</sup> In June 2015 prices.

<sup>c</sup> Physical contingencies computed at 2% for civil works. Price contingencies computed at 2.5% of foreign exchange costs and 5.5% of local currency costs.

<sup>d</sup> Includes interest and commitment charges. Interest during construction for the ADB loan is computed at the 5-year forward London interbank offered rate (LIBOR) plus a spread of 0.5% and maturity premium of 0.10%. Commitment charges for the ADB loan are 0.15% per year on the undisbursed loan amount.

Source: Asian Development Bank estimates.

11. The government has requested a loan of \$300,000,000 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 and project agreements. The government has requested that repayment follow the straight-line repayment option. Based on the above 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 annum.

<sup>8</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

12. The financing plan is in Table 2. The ADB loan will finance 70% of the project cost. This is considered acceptable, as GOUP has allocated counterpart financing for 30% of the cost.

**Table 2: Financing Plan**

<b>Source</b>	<b>Amount (\$ million)</b>	<b>Share of Total (%)</b>
Asian Development Bank		
Ordinary capital resources (loan)	300	70
Government of Uttar Pradesh	128	30
<b>Total</b>	<b>428</b>	<b>100</b>

Source: Government of Uttar Pradesh and Asian Development Bank estimates.

## **E. Implementation Arrangements**

13. The executing agency for the project will be Public Works Department, Government of Uttar Pradesh, which will implement the project through its project implementation unit (PIU) based in the state's capital city, Lucknow. Headed by the chief engineer for externally aided projects, the PIU will have field offices in key locations, be responsible for day-to-day project implementation and management, and assign staff to work on the project. One executive engineer will be assigned as project manager for two or three contract packages. The project managers will be delegated adequate technical and administrative authority for expeditious project implementation. The PIU will engage construction supervision consultants 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 3 and described in detail in the PAM.

**Table 3: Implementation Arrangements**

<b>Aspects</b>	<b>Arrangements</b>		
Implementation period	April 2016–March 2021		
Estimated completion date	31 March 2021	Loan closing date	30 September 2021
<b>Management</b>			
(i) Executing agency	Public Works Department, Government of Uttar Pradesh		
(ii) Implementation unit	One PIU at the UPPWD headquarters in Lucknow, headed by the chief engineer for externally aided projects, and field units in Aligarh, Kanpur, Lucknow, and Moradabad. Each unit will be headed by an executive engineer-level officer and have enough support staff. About 35 full-time staff will be assigned to the project, plus oversight and control from the UPPWD principal secretary at Lucknow.		
Procurement	National competitive bidding	10 contracts	\$20,000,000 to \$40,000,000 each



Aspects	Arrangements		
Consulting services	Quality- and cost-based selection; full technical proposal	About 2,200 person-months for supervision consultants, 120 person-months for road safety audit, and 192 person-months for implementation support consultants	\$10,000,000 (total, in three packages)
Retroactive financing and/or advance contracting	Works 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 between the government and ADB.		

ADB = Asian Development Bank, PIU = project implementation unit, UPPWD = Public Works Department of the Government of Uttar Pradesh.

Source: Asian Development Bank.

15. ADB approved advance contracting of civil works in September 2013. UPPWD has completed the preparation of DPRs for all project roads, including safeguard assessment. UPPWD has prepared the master bidding documents and commenced bidding for civil works. Based on this, the national and state governments requested retroactive financing for all project components. Up to 20% of the loan proceeds will be eligible for retroactive financing, provided that expenditures are incurred on works and consulting services for the project in accordance with agreed procedures and before loan effectiveness, but not more than 12 months before the signing of the loan agreement. The national and state governments and UPPWD have been informed that approval of advance contracting and retroactive financing does not in any way commit ADB to finance the project.

### III. DUE DILIGENCE

#### A. Technical

16. The project was prepared by UPPWD, which has experience with a previous World Bank loan and technical assistance.<sup>9</sup> UPPWD engaged consultants with its own funds to prepare DPRs for the roads proposed for ADB financing, incorporating ADB requirements of economic, social, and environmental studies into the consultants' terms of reference. ADB engaged a consulting firm under a project preparatory technical assistance to conduct due diligence and supplement the DPRs to ensure the due diligence complies with ADB requirements. The engineering design was prepared to avoid land acquisition as well as social and environmental impacts, and to take road safety into account. In addition, advance actions have been taken to ensure the construction can commence early. All these measures have improved project readiness and will mitigate the risk of delay.

<sup>9</sup> World Bank. India: Uttar Pradesh State Roads Project. <http://www.worldbank.org/projects/P067606/uttar-pradesh-state-roads-project?lang=en&tab=overview>. This project provided for technical assistance.

## B. Economic and Financial

17. **Economic assessment.** Economic evaluation of the project followed the standard practice of comparing life cycle road and user costs with and without the project, using the net present value with a 12% discount rate and economic internal rate of return (EIRR) as decision criteria. The highway development and management system was used in the analysis, which focused on transport cost savings.

18. The EIRRs for the project roads are assessed as 16.9%–21.2% in the base case, and remain above 13.8% in sensitivity scenarios. Overall, the economic returns for roads are robust, satisfying the economic efficiency criteria. Sensitivity analysis was carried out to investigate the robustness of the economic viability of the project to cost overruns and benefit reductions. The following cases were analyzed: (i) base cost and base benefits, (ii) capital cost increased by 10% and base benefits, (iii) benefits reduced by 10% and capital cost, (iv) capital cost increased by 10% and benefits reduced by 10%, and (v) a 1-year delay in construction. The results of the sensitivity analysis are in Table 11. In all cases, all project roads have EIRRs above 12%. The analysis result of adverse scenarios shows the project is economically viable.

19. **Financial sustainability.** Annual average incremental recurrent costs associated with the project are estimated to be 0.1% of UPPWD's current maintenance budget and a marginal proportion of UPPWD's overall maintenance budget on an annual basis. Funds allocated for road maintenance have been rising by about 19% per year from FY2004 to FY2015. The 5-year maintenance obligation will be part of the project, so it is included in the legal agreements and will be part of the contracts. Thus, it is reasonable to expect that funds will be available to meet the maintenance costs.

## C. Governance

20. **Institutional capacity.** UPPWD, the executing agency, is a department of the Government of Uttar Pradesh. Established in the 1850s, UPPWD has also managed railways, irrigation, and local government infrastructure projects. It currently manages roads and government buildings in Uttar Pradesh. UPPWD has over 50,000 employees, about 14% of whom are technical staff. It is headed by an engineer-in-chief and head of department, two engineers-in-chief, and 25 chief engineers. While UPPWD has extensive experience (technical, contracting, and implementation) in public works, its experience working with multilateral agencies is limited to one World Bank loan (footnote 9). ADB and the World Bank are each appraising a road sector loan for UPPWD at present.

21. **Financial management.** An assessment of UPPWD's accounting systems and financial reporting and audit procedures concluded that the department conducts its accounts in accordance with standard single-entry, cash-based government systems and by its budget allocation. UPPWD has experience in project financial accounting and disbursement procedures based on its prior experience with a World Bank-funded project. The assessment has concluded that the overall risk is *moderate*. Key risk and mitigation measures have been identified as part of the assessment. UPPWD will retain an accounting firm under this project to assist in project accounts and train the concerned staff. UPPWD will maintain separate project accounts and records by funding source for all expenditures incurred on the project. Project accounts will be computerized and follow accounting principles and practices prescribed by the government's accounting laws and regulations. Internal audit is carried out by the Audit and Accounts Department of GOUP, and is subject to audit by the Comptroller and Auditor General of India in accordance with the Accounts and Audit Standards issued by the Government of India. With the

above proposed actions, the overall financial management arrangements are considered satisfactory for the project.

22. **Procurement.** All consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants using quality- and cost-based selection. All civil works will be procured through national competitive bidding. E-procurement is essential for all works contracts in Uttar Pradesh, and will be used in this project. Goods and works will be procured following ADB's Procurement Guidelines. UPPWD has extensive experience in procurement and consultant recruitment for public sector projects, although experience with multilateral agency procurement is limited to one World Bank project. Project preparatory technical assistance consultants supported UPPWD in preparing procurement documents for all project roads. Recruitment of construction supervision consultants is already under way. The procurement plan for the project is appended in the PAM.

23. **Anticorruption.** ADB's Anticorruption Policy (1998, as amended to date) was explained to and discussed with the government and UPPWD. The specific policy requirements and supplementary measures are described in the PAM.

#### D. Poverty and Social

24. Uttar Pradesh is one of the poorer and less developed states in India, with per capita income less than half the national average and about 30% of population below the poverty line.<sup>10</sup> Agriculture is the main source of livelihood for 80% of the state's population; trade and nonagricultural labor are its other sources of income (footnote 3). This also applies to the project area of influence, which covers 12 districts with a total population of 34.8 million.<sup>11</sup> Infrastructure services along the road corridor are basic, with drinking water mostly accessed through government-provided hand pumps. While rural areas are not connected to the grid, most urban settlements have electricity.

25. Project beneficiaries will be roadside residents, road users, shop owners, and farmers. According to the survey data, roadside residents' most frequent motorized journey patterns are from their residence to bigger market towns, district hospitals, and administrative services, as well as secondary schools and colleges. Few (3%–10%) residents own private vehicles, and most of them use collective transport to move around. Consultations, which involved 1,665 participants, indicated that poor road conditions were preventing safe and reliable travel, especially at night and during the rainy season. The project will provide improved access to social services and facilitate stronger links between rural regions and urban hubs.

26. **Gender.** Uttar Pradesh has very poor gender indicators and has one of the lowest sex ratios in the country at 912 females per 1,000 males (footnote 3). Local customs in many of the project roads have limited women's participation in consultation activities. ADB consultants organized 23 women-specific focus group discussions with 312 female participants to ensure their views were integrated into the project design. According to the focus group discussions and baseline survey, walking is women's predominant means of transportation, and the use of bicycles by schoolgirls is common only in a minority of project roads. The majority of women were reported to use collective transport, although many perceived it to be unsafe. The following

<sup>10</sup> Government of India, Planning Commission. 2011. *Press Note on Poverty estimates*. Delhi.

<sup>11</sup> These districts are Aligarh, Baghpat, Bulandshahar, Deoria, Etah, Fatehpur, Kashiramnagar, Kushinagar, Lucknow, Muzaffarnagar, Sultanpur, and Unnao.

gender-sensitive features have been included in the project: (i) constructing 344 bus shelters; (ii) including road safety features friendly to the elderly, women, children, and people with disabilities in the road design; (iii) ensuring and monitoring the participation of women in community awareness activities and consultations; and (iv) monitoring female participation in construction and maintenance activities.

27. **Other social considerations.** Uttar Pradesh has 0.10% HIV prevalence, lower than the national average of 0.27%.<sup>12</sup> Given that the project involves improving existing corridors, it is not expected to increase HIV incidence. Nevertheless, contractors will carry out HIV and AIDS awareness programs for their laborers at work sites. As for human trafficking, the prevalence in the project area is low.<sup>13</sup> As part of the project, community awareness campaigns for road residents on HIV and AIDS, human trafficking, and personal and road safety will be conducted by the nongovernment organization implementing the resettlement plan in coordination with existing local initiatives. Moreover, UPPWD will ensure that all contracts include provisions to safeguard labor standards.

## E. Safeguards

28. **Environmental impact.** The scope of works under the project involves the improvement and maintenance of existing MDRs. Adequate right-of-way is available for all project roads, and no significant, long-term, or irreversible environmental impacts are expected. None of the roads fall inside environmentally sensitive areas. Therefore, the project has been classified category B in accordance with ADB's Safeguard Policy Statement (2009). A single initial environmental examination (IEE) report has been prepared containing road-specific environmental management plans (EMPs), in accordance with the safeguard policy, and is disclosed on the ADB website. Anticipated environmental impacts under the project entail typical road construction-related issues, such as generation of dust, noise, exhaust, waste from construction and worker camps, water contamination, occupational health and safety, erosion, and siltation.

29. **Environmental Measures.** The EMPs include mitigation measures to address these impacts, such as dust suppression along active construction fronts and camp sites; use of mobile noise barriers; and strict implementation of road safety-related Indian Road Congress and contract-specific safety, health, and environment guidelines. The mandatory 1:2 compensatory plantation for the loss of avenue trees along UPPWD roads will be done. In addition, UPPWD will obtain consent from land owners and jurisdictional district forest offices to install additional plantation and permanent noise barriers near the locations of sensitive receptors—such as schools, hospitals, and other areas identified in the IEE—to minimize noise and dust levels during project operation. The costs of these measures are included in the civil works contract. The road-specific EMPs will form part of the bidding documents. Meaningful consultations have been conducted during project preparation, and all the concerns of the affected persons and stakeholders have been incorporated in the IEE and EMPs. These consultations included representatives from key environmental agencies, roadside communities, and nongovernment organizations. An integrated social and environmental grievance redress mechanism has been formed to continue receiving feedback and complaints, if any, from affected parties, and addressing them during the construction stage and operation stage.

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<sup>12</sup> Government of India, Department of Health and Family Welfare. National AIDS Control Organisation. State Fact Sheet 2013–14. [http://naco.gov.in/NACO/Quick\\_Links/Publication/State\\_Fact\\_Sheets/](http://naco.gov.in/NACO/Quick_Links/Publication/State_Fact_Sheets/) (accessed 25 February 2016).

<sup>13</sup> Summary of Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

30. **Involuntary resettlement.** The project is classified category A according to ADB's Safeguard Policy Statement. It is expected to affect 976 non-titled households totaling 7,103 people. UPPWD's right-of-way ownership of all road corridors has been verified with the local Land Revenue Records Department, and the project does not require private land acquisition. Road designs have been modified to avoid resettlement impacts to the extent possible. Overall, impacts will be limited to external sections of residential and commercial structures (i.e., verandas, stairs, and balconies) without affecting their viability.<sup>14</sup> Only 27 households will be fully displaced, most of them losing their commercial structures. Impacts have been adequately addressed through the seven resettlement plans and one due diligence report prepared for the project.<sup>15</sup> These documents are disclosed on the ADB and executing agency websites.<sup>16</sup> Affected persons will be compensated at replacement cost and provided with relocation, reconstruction, and income restoration assistance. Special measures have been integrated for vulnerable households. Grievance redress committees have been set up in the field offices and headquarters. The executing agency will implement and finance the resettlement plans. All mitigation measures follow the guidelines of the resettlement framework approved by ADB and UPPWD.<sup>17</sup>

31. **Indigenous people.** The project is classified category C in accordance with ADB's Safeguard Policy Statement. Uttar Pradesh has a low tribal population, representing only 1.1% of its total population (footnote 3). The census survey confirmed that the project will not affect scheduled tribe households.

32. **Safeguards implementation arrangements.** Although UPPWD is familiar with multilateral development bank safeguards requirements, having recently implemented a World Bank project, it did not originally have staff dedicated to safeguard implementation. This project will build on UPPWD's experience and strengthen its implementation capacity by including dedicated safeguards staff. At the central level, UPPWD's capacity will be increased by adding one social and one environmental safeguard officer fully dedicated to safeguards. They will be supported by two outsourced environmental and social consultants. At the field level, each PIU will appoint a focal person dedicated to the management of environment and social safeguards as well as grievances (safeguards focal officer). The field-level PIU safeguards focal officer will be supported by the environmental and resettlement specialists of the construction supervision consultants, who will guide and monitor the implementation of EMPs and resettlement plans, as well as the awareness campaign, labor standard, and gender activities.

## F. Risks and Mitigating Measures

33. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>18</sup> Based on the overall assessment, the integrated benefits and impacts are expected to outweigh the costs.

<sup>14</sup> Understood as affecting a structure's main walls.

<sup>15</sup> Bulandshahr–Anoopshahr–Dibai Chowk road (58W) is the only project road where no resettlement impacts have been identified, so a due diligence report has been prepared in lieu of a resettlement plan.

<sup>16</sup> ADB. India: Uttar Pradesh Major District Roads Improvement Project. <http://www.adb.org/projects/43574-025/main>; and UPPWD. ADB Projects. <http://uppwd.up.nic.in/ADB.html>.

<sup>17</sup> ADB and UPPWD approved a resettlement framework in April 2015 to guide the preparation of the resettlement plan and meet the legislative requirements for the implementing agencies to conduct the resettlement activities under the project. At the time of writing, the framework is being examined by Uttar Pradesh's cabinet.

<sup>18</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

**Table 4: Summary Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
Initial delays in project implementation	UPPWD has prepared the detailed design for all eight project roads, and completed safeguards-related surveys and reviews. Consultant recruitment for construction supervision has been initiated, and procurement documents have been prepared. Procurement actions have been initiated in January 2016. Project designs have been prepared to avoid land acquisition. However, given UPPWD's limited experience with multilateral agency projects, the risk after mitigation is retained as <i>medium</i> .
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 quality of contracts. Four project implementation field units are being envisaged, distributed around the state in proximity to work sites. These units will be supported by firms of construction supervision consultants. The introduction of 5-year, performance-based maintenance in works contracts will substantially increase contractor accountability for construction quality. Despite these steps, quality control will remain as a task that is best addressed by field staff. The roads are dispersed geographically throughout this large state. Therefore, the level of risk after mitigation is being retained as <i>medium</i> .
Insufficient funds available for road maintenance works	Five-year performance-based contracts will be adopted and included in the works contracts. This will be monitored during the maintenance period.

ADB = Asian Development Bank, UPPWD = Public Works Department of the Government of Uttar Pradesh.  
Source: Asian Development Bank.

#### **IV. ASSURANCES AND CONDITIONS**

34. The national and state governments and the UPPWD 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 UPPWD have agreed with ADB on certain covenants for the project, which are set forth in the loan and project agreements.

#### **V. RECOMMENDATION**

35. 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 \$300,000,000 to India for the Uttar Pradesh Major District Roads Improvement 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

18 March 2016

## DESIGN AND MONITORING FRAMEWORK

<b>Impact the project is aligned with</b>			
Mobility and accessibility improved (Twelfth Five-Year Plan) <sup>a</sup>			
<b>Results Chain</b>	<b>Performance Indicators with Targets and Baselines</b>	<b>Data Sources and Reporting</b>	<b>Risks</b>
<p><b>Outcome</b></p> <p>Efficiency and safety of the core road network in Uttar Pradesh improved</p>	<p>By 2022</p> <p>a. Movement of people and goods on rehabilitated roads measured by annual average daily traffic increased to 71,000 (2015 baseline: 53,400)</p> <p>b. Average travel time on the project roads reduced by 25% (2015 baseline: 1.61 minutes per km)</p> <p>c. Vehicle operating cost (economic) on the project roads reduced by 25% (2015 baseline: Rs13 per km in the case of cars and Rs27 per km in the case of medium trucks)</p> <p>d. Annual deaths from road accidents on the project roads reduced to fewer than 100 (2014 baseline: 109)</p>	<p>a-c. Post-implementation measurement by UPPWD</p> <p>d. Data collated from police jurisdictions by UPPWD</p>	<p>a. Severe economic reversals are encountered in the state</p> <p>b. Poor cooperation and coordination from Transport and Traffic Police departments in regulation and enforcement</p>
<p><b>Outputs</b></p> <p>1. MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated</p> <p>2. Road maintenance and asset management improved</p> <p>3. Road safety of MDRs in the CRN audited and safety features installed</p>	<p>By 2021</p> <p>1. About 430 km of MDRs reconstructed and rehabilitated, with road safety features friendly to the elderly, women, children, and people with disabilities at appropriate locations<sup>b</sup></p> <p>2. Contracts with 5-year, performance-based maintenance adopted for all MDRs under the project</p> <p>3. Road safety audit of MDRs in the CRN conducted and appropriate and cost-efficient measures for addressing accident-prone spots implemented</p>	<p>1. Progress reports by UPPWD</p> <p>2. Progress reports by UPPWD</p> <p>3. Road safety audit report, progress reports by UPPWD</p>	<p>Major turnover in key UPPWD staff during implementation</p>

<p><b>Key Activities with Milestones</b></p> <p><b>Output 1: MDRs, designed to all-weather standards and road safety, reconstructed and rehabilitated</b></p> <p>1.1 Award and mobilize construction supervision consultant by Q3 2016  1.2 Award contracts for reconstruction and/or rehabilitation of about 430 km of roads by Q4 2016 and complete construction by Q4 2021  1.3 Initiate post-implementation measurement of indicators by UPPWD by Q1 2021</p> <p><b>Output 2: Road maintenance and asset management improved</b></p> <p>2.1 Start implementation of performance-based contracts for MDRs under the project by Q4 2018</p> <p><b>Output 3: Road safety of MDRs in the CRN audited and safety features installed</b></p> <p>3.1 Conduct road safety audit by Q4 2019  3.2 Implement appropriate and cost-efficient measures for addressing accident-prone spots by Q4 2020</p> <p><b>Project Management Activities</b></p> <p>Project implementation units established by Q1 2016  Project implementation support consultants recruited by Q1 2016  Counterpart funds available by Q1 2016  Resettlement plan activities completed by Q4 2016</p>
<p><b>Inputs</b></p> <p>ADB: \$300,000,000 loan  Government of Uttar Pradesh: \$128,000,000</p>
<p><b>Assumptions for Partner Financing</b></p> <p>Not applicable.</p>

ADB = Asian Development Bank, CRN = core road network, km = kilometer, MDR = major district road, Q = quarter, Rs = Indian rupees, UPPWD = Public Works Department of the Government of Uttar Pradesh.

<sup>a</sup> Government of India, Planning Commission. *Twelfth Five-Year Plan, 2012–2017*. Delhi.

<sup>b</sup> Features include well marked crossings, safety signage, and pedestrian walkways.

Source: Asian Development Bank.



**LIST OF LINKED DOCUMENTS**

<http://adb.org/Documents/RRPs/?id=43574-025-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Transport (Road Transport [Nonurban])
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. Resettlement Plan: Aliganj–Soron Road
12. Resettlement Plan: Haliyapur–Kudebhar Road
13. Resettlement Plan: Hussainganj–Alipur Road
14. Resettlement Plan: Kaptanganj–Naurangiya Road
15. Resettlement Plan: Mohanlalganj–Maurawan–Unnao Road
16. Resettlement Plan: Muzaffarnagar–Baraut Road
17. Resettlement Plan: Nanau–Dadon Road
18. Resettlement Framework
19. Risk Assessment and Risk Management Plan

**Supplementary Documents**

20. Supplementary Appendix A: Financial Management Assessment
21. Supplementary Appendix B: Project Climate Risk Assessment and Management Report
22. Supplementary Appendix C: State Road Safety Policy
23. Supplementary Appendix D: Due Diligence Report: Bulandshahr–Anoopshahr Road