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R29-17  
Corrigendum 1  
22 May 2017

## Corrigendum to Document R29-17 Proposed Multitranche Financing Facility Rajasthan State Highway Investment Program (India)

The following corrections have been made in the above document to clarify the (i) disclosure status of resettlement plans, and (ii) baseline data of performance indicators in the design and monitoring framework in Appendix 1:

- |      |  |  |
|------|--|--|
| (i)  | Page 9, para. 29, third line   | Replace "will be appropriately disclosed." with " <b>have been disclosed on ADB's website.</b> "   |
| (ii) | Appendix 1: Design and Monitoring Framework for the Investment Program, Performance Indicators with Targets and Baselines column | By 2025, end of item a: add " <b>(2016 baseline: 6,316 million)</b> "<br><br>By 2025, end of item b: add " <b>(2016 baseline: Not mainstreamed)</b> "<br><br>By 2022, end of item 1: add " <b>(2016 baseline: 0)</b> "<br><br>By 2024, end of items 2a and 2b: add " <b>(2016 baseline: Not implemented)</b> " |



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(For consideration by the Board on or about 23 May 2017)

R29-17

19 April 2017

## Proposed Multitranche Financing Facility Rajasthan State Highway Investment Program (India)

1. The Report and Recommendation of the President (RRP: IND 49228-001) on the proposed multitranche financing facility to India for the Rajasthan State Highway Investment Program is circulated herewith.
2. This Report and Recommendation should be read with *Country Partnership Strategy: India, 2013–2017*, which was circulated to the Board on 7 October 2013 (DOC.Sec.M44-13).

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

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Project Number: 49228-001  
April 2017

## Proposed Multitranche Financing Facility India: Rajasthan State Highway Investment Program

Distribution of this document is restricted until it has been approved by the Board of Directors. Following such approval, ADB will disclose the document to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 10 March 2017)

Currency Unit	–	Indian rupee/s (₹)
Re1.00	=	\$0.0148
\$1.00	=	₹66.713

## ABBREVIATIONS

ADB	–	Asian Development Bank
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
EPC	–	engineering, procurement, and construction
FAM	–	facility administration manual
km	–	kilometer
MDR	–	major district road
MFF	–	multitranches financing facility
O&M	–	operation and maintenance
PPP	–	public–private partnership
RPWD	–	Public Works Department of the Government of Rajasthan
SHDP	–	state highway development program

## 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 ends on 31 March 2016.
- (ii) In this report, “\$” refers to US dollars.

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INVESTMENT PROGRAM<sup>a</sup> AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 49228-001	
<b>Project Name</b>	Rajasthan State Highway Investment Program	<b>Department /Division</b>	SARD/SATC
<b>Country Borrower</b>	India India	<b>Executing Agency</b>	Government of Rajasthan
<b>2. Sector</b>		<b>ADB Financing (\$ million)</b>	
✓ <b>Transport</b>	<b>Subsector(s)</b> Road transport (non-urban)		500.00
		<b>Total</b>	<b>500.00</b>
<b>3. Strategic Agenda</b>		<b>Climate Change Information</b>	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive Global and regional transboundary environmental concerns	Adaptation (\$ million)	4.20
Environmentally sustainable growth (ESG)		Climate Change impact on the Project	Medium
<b>4. Drivers of Change</b>		<b>Gender Equity and Mainstreaming</b>	
Governance and capacity development (GCD)	Organizational development	Some gender elements (SGE)	✓
Private sector development (PSD)	Public sector goods and services essential for private sector development		
<b>5. Poverty and SDG Targeting</b>		<b>Location Impact</b>	
Geographic Targeting	No	Rural	High
Household Targeting	No	Urban	Low
SDG Targeting	Yes		
SDG Goals	SDG9		
<b>6. Risk Categorization:</b>		Complex	
<b>7. Safeguards Categorization [Tranche 1]</b>		Environment: B Involuntary Resettlement: A Indigenous Peoples: C	
<b>8. Financing</b>			
Modality and Sources	Indicative Tranches (\$million)		Amount (\$million)
	I	II	
<b>ADB</b>			<b>500.00</b>
Sovereign MFF-Tranche (Regular Loan): Ordinary capital resources	220.00	280.00	500.00
<b>Cofinancing</b>			<b>0.00</b>
None	0.00	0.00	0.00
<b>Counterpart</b>			<b>915.00</b>
Government	220.00	245.00	465.00
Others	215.00	235.00	450.00
<b>Total</b>	<b>655.00</b>	<b>760.00</b>	<b>1,415.00</b>
<b>9. Effective Development Cooperation</b>			
Use of country procurement systems			No
Use of country public financial management systems			Yes
<b>10. Country Operations Business Plan</b>			
<b>CPS</b>	<a href="http://www.adb.org/documents/india-country-partnership-strategy-2013-2017">http://www.adb.org/documents/india-country-partnership-strategy-2013-2017</a>		
<b>COBP</b>	<a href="http://www.adb.org/documents/india-country-operations-business-plan-2015-2017">http://www.adb.org/documents/india-country-operations-business-plan-2015-2017</a>		
<b>11. Investment Program Summary</b>			
The investment program will improve the efficiency and safety of transport on the state highways of Rajasthan, thereby providing good quality connectivity for social and economic activities. The investment program will (i) upgrade about 2,000 kilometers (km) of state highways and major district roads (MDRs) to two-lane or intermediate-lane standards in keeping with road safety requirements; and (ii) enhance the capacity of the Public Works Department of the Government of Rajasthan (RPWD) by (a) improving the business processes and procedures of its public-private partnership (PPP) division and (b) implementing a project performance monitoring system. The investment program will catalyze the sustainable development of			

## INVESTMENT PROGRAM<sup>a</sup> AT A GLANCE

Rajasthan through the collaboration of the public and private sectors.

**Impact:** Good quality connectivity in all areas provided

**Outcome:** Efficiency and safety of transport on the state highways of Rajasthan improved.

**Outputs:** (i) State highways and major district roads improved, and (ii) Capacity of RPWD enhanced.

**Implementation Arrangements:** Government of Rajasthan will be the executing agency.

**Project Readiness:** Engineering design has been done by the government in 2015. Procurement of civil works started in January 2016.

### 12. Milestones

Modality	Estimated Approval	Estimated Completion <sup>b</sup>
Multitranche financing facility	23 May 2017	30 September 2024
Tranche I	15 June 2017	30 September 2022
Tranche II	31 December 2018	30 September 2024

### 13. Project Data Sheet (PDS)

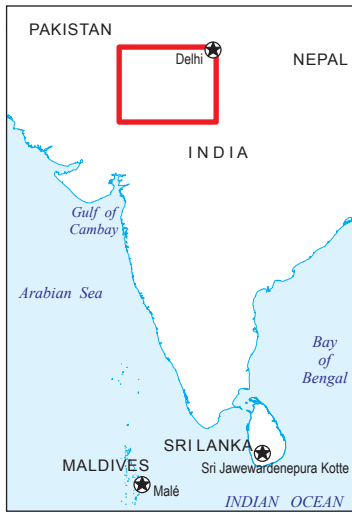
**PDS**<sup>c</sup> <http://www.adb.org/projects/49228-001/main>

<sup>a</sup> Multitranche Financing Facility (MFF).

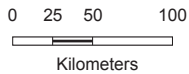
<sup>b</sup> For MFF, this refers to the end of the availability period; for tranches, this refers to the tranche closing date.








<sup>c</sup> Safeguard documents can be viewed by clicking the Document's hyperlink in the Project Data Sheet (PDS) page.

# INDIA RAJASTHAN STATE HIGHWAY INVESTMENT PROGRAM



PAKISTAN



-  National Capital
  -  State Capital
  -  City/Town
  -  Project Roads (Tranche 1)
  -  National Highway
  -  Other Roads
  -  State or Union Territory Boundary
- Boundaries are not necessarily authoritative.

This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed multitranche financing facility (MFF) to India for the Rajasthan State Highway Investment Program.<sup>1</sup>

2. The investment program will improve the efficiency and safety of transport on the state highways of Rajasthan, thereby providing good quality connectivity for social and economic activities. The investment program will (i) upgrade about 2,000 kilometers (km) of state highways and major district roads (MDRs) to two-lane or intermediate-lane standards in keeping with road safety requirements; and (ii) enhance the capacity of the Public Works Department of the Government of Rajasthan (RPWD) by (a) improving the business processes and procedures of its public-private partnership (PPP) division and (b) implementing a project performance monitoring system. The investment program will catalyze the sustainable development of Rajasthan through the collaboration of the public and private sectors.

## II. THE INVESTMENT PROGRAM

### A. Rationale

3. India is the world's seventh-largest economy by nominal gross domestic product and the third-largest by purchasing power parity.<sup>2</sup> Since FY2013 when the growth rate slowed to 5.1%, the economy has been gradually recovering, attaining 7.3% growth in FY2015.<sup>3</sup> The poverty head count ratio has also steadily decreased. To sustain this growth, India must expand and consolidate its structural reforms, eliminate its infrastructure deficit, and improve the quality and coverage of basic social services. India's transport infrastructure in particular requires significant improvements. Various modes of transport must be sustainably developed to provide an efficient, safe, and regionally balanced transport system.

4. Rajasthan is India's largest state by area, accounting for about 10% of the country's total area and nearly 5.6% of the total population (around 68.5 million people).<sup>4</sup> However, in 2015 the state's economy only represented about 4.8% of India's gross domestic product, and its per capita income was only about 87% of the national average.<sup>5</sup> Around 75% of the state's inhabitants live in rural areas and depend primarily on agriculture for their livelihood. The per capita development cost in the state is very high because the population is widely dispersed. Although the state has strong potential for growth—e.g., in agriculture and agro-based industries, mining and minerals processing, tourism, handicrafts, and cottage industries—this potential remains underutilized due to poor connectivity to markets and social services.

5. **Sector road map.** Rajasthan's road network covers about 217,707 km, including 8,168 km of national highways, 15,607 km of state highways, 7,647 km of MDRs, 30,313 km of other district roads, and 155,973 km of rural roads. Road density in Rajasthan is only around 63.61 km per 100 square km, compared with the national average of 166.47 km. The number of vehicles registered in Rajasthan has increased dramatically. Statistics from the Transport Department of

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

<sup>2</sup> International Monetary Fund (IMF). World Economic Outlook Database October 2015. <http://www.imf.org/external/pubs/ft/weo/2015/02/weodata/index.aspx> (accessed 31 March 2016).

<sup>3</sup> IMF. 2016. India: 2016 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for India. *IMF Staff Country Report*. No. 16/75. Washington, DC.

<sup>4</sup> Government of India, Office of the Registrar General and Census Commissioner. 2011. *Census of India 2011*. Delhi.

<sup>5</sup> Government of Rajasthan, Directorate of Economics and Statistics. 2015. *Economic Review, 2015–2016*. Jaipur.

Rajasthan show that the state registered about 13.4 million vehicles in 2015, 48.6% more than in 2011.

6. To support Rajasthan's development through economic growth, poverty reduction, and inclusiveness, the state government aims to provide a safe, sound, environment-friendly and sustainable state-of-the-art road infrastructure network.<sup>6</sup> To achieve this objective, the following key factors must be addressed:

- (i) **Sector funding level.** The state budget for capital road works is less than 3% of the state's total planned budget, which is inadequate to undertake large-scale road development programs. Thus, a significant increase in capital investments will be required from the public and private sectors.
- (ii) **Maintenance.** The premature deterioration observable on the state highways reflects the maintenance backlog. It is essential to develop adequate policies, procedures, and institutional capacity to plan, fund, and implement the maintenance works.
- (iii) **Road safety management.** The road safety situation in Rajasthan is serious and deteriorating. In 2014, road accidents were the fifth leading cause of accidental death in Rajasthan.<sup>7</sup> Thus, it is necessary to strengthen both the engineering and non-engineering aspects of road safety management capacity in Rajasthan.
- (iv) **Capacity development.** It is the first time for RPWD to implement an ADB-funded project. Although RPWD has adequate technical capacity for project management, it needs supports on complying with ADB's policies on procurement, safeguards, and other related areas. As the owner of most of the roads in Rajasthan, the RPWD needs to strengthen its capacity with regard to road asset management, road safety, and information management.

7. **Strategic context.** India's Twelfth Five Year Plan identified transport as a priority sector.<sup>8</sup> Due to public resource constraints, private participation must supplement public investment. The plan encourages state governments to implement state highway development programs (SHDPs) similar to the National Highway Development Program. It is estimated that developing these programs will cost ₹4.9 trillion, of which at least 20% is expected to be funded by private investment. In 2014, Rajasthan announced its SHDP, which aims to upgrade about 20,000 km of state highways and MDRs to two-lane or intermediate-lane state highway standards using three PPP models: (i) toll-based PPP concessions; (ii) annuity-based PPP concessions; and (iii) engineering, procurement, and construction (EPC) contracts.<sup>9</sup> All SHDP projects will be assessed according to the contracts' financial models and the strategic priority of road improvement to select the most appropriate contract model and procurement approach.

8. **Public-private partnership.** The road subsector in India is shifting away from traditional rate-based contracts with the private sector to output-, performance-, and even partnership-based contracts. Since the late 1990s, the public and private sectors in India have made substantial

<sup>6</sup> Government of Rajasthan. 2014. *Conference on Public-Private Partnership: Rajasthan State Highways Development Programme*. Delhi.

<sup>7</sup> Government of India, Ministry of Home Affairs, National Crime Records Bureau. 2015. *Accidental Deaths & Suicides in India 2014*. Delhi.

<sup>8</sup> Government of India, Planning Commission. 2012. *Twelfth Five Year Plan, 2012-2017: Faster, More Inclusive and Sustainable Growth*. Delhi.

<sup>9</sup> While the PPP viability gap funding model will transfer to the private sector concessionaire the risk of recovering the capital investment from toll revenue, the PPP annuity model keeps the risk in the public sector. The annuity model defers the payment of a portion of construction and maintenance costs to the concession period as annuity payments, which will be made in compliance with performance metrics. Therefore, the PPP annuity model essentially follows the principles of performance-based road contracts.

efforts to develop PPP models and resolve many issues in the road subsector.<sup>10</sup> However, this subsector has shown diminishing interest in toll-based PPP projects in light of overextended financial and engineering risks with regard to design and execution. This model will only suit a small number of SHDP projects since traffic volumes on most roads are not adequate to ensure financial viability. Instead, most SHDP projects are expected to adopt the annuity-based PPP and the EPC models, which transfer the engineering risks to the private sector using output-based contract forms.

9. **Value addition from ADB.** Asian Development Bank (ADB) will finance part of the construction costs for the annuity-based PPP concessions and EPC contracts, enhance the stability of the contract regime with the loan and project agreements, and ensure good governance during project implementation, particularly on procurement and safeguards. The annuity-based PPP model attracts private sector financing to address the capital investment requirements, where a proportion of initial capital expenditure is paid during construction while the balance is serviced by annuity payments during the operation and maintenance (O&M) phase. The SHDPs require EPC contracts to balance the risks of PPP projects because they enable the state government to (i) manage the risk of financial closure in PPP projects due to fluctuating market interests, (ii) maintain the government's extended liability to annuity payments at an acceptable level, and (iii) deliver high-priority projects with a short procurement period.

10. **Policy framework.** The RPWD manages about 149,080 km of national highways, state highways, MDRs, and rural roads in Rajasthan. Other agencies that manage roads in the state include (i) the Rajasthan State Road Development and Construction Corporation, which implements projects on about 2,000 km of state highways; (ii) the Road Infrastructure Development Company of Rajasthan, a special purpose vehicle created through a partnership between the state government and the private sector, which manages another 2,000 km of roads; (iii) the National Highways Authority of India; and (iv) the Border Roads Organisation.

11. In 2014, a high-level council for infrastructure development was formed to decide on SHDP-related policy and institutional issues. In 2015, the state legislature enacted the Rajasthan State Highways Act to empower the state government to develop and operate state highways with provisions for access control, traffic regulation, and toll collection, to be executed by the RPWD. The state government also adopted the Road Safety Action Plan, which has initiated road safety awareness campaigns, and started engineering and enforcement actions.

12. The investment program, an integral part of the SHDP, aligns with India's country strategy, the Twelfth Five Year Plan, and ADB's country partnership strategy, 2013–2017, which both aim to improve the transport sector to increase the movement of people and goods in a more efficient, safe, and sustainable manner.<sup>11</sup> The investment program has been prepared to address the key success factors (para. 6) by (i) catalyzing private sector investment, (ii) strengthening the maintenance and road safety arrangements during the operation period, and (iii) enhancing the RPWD's capacity for project implementation and as a long-term asset manager.

13. An MFF is proposed as the financing modality because it better suits a large-scale program requiring long-term engagement and partnership between the government and ADB on policy dialogue and capacity development.<sup>12</sup> The modality also allows a phased approach for the

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<sup>10</sup> ADB. 2015. *Trial Balance: Private Sector Financing for Road Projects in India*. Manila.

<sup>11</sup> ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

<sup>12</sup> Comparison of Financing Modality (accessible from the list of linked documents in Appendix 2).

government to make necessary adjustment based on lessons learned in Tranche 1, so that the risks of procuring and implementing civil works through PPP can be timely mitigated.

## B. Impact and Outcome

14. The impact will be good quality connectivity provided in all areas, aligned with India's Twelfth Five Year Plan. The outcome will be the improved efficiency and safety of transport on the state highways of Rajasthan.

## C. Outputs

15. The investment program will deliver two outputs—(i) improved state highways and MDRs, and (ii) the enhanced capacity of the RPWD—through the following components:

- (i) **Road improvement.** About 2,000 km of state highways and MDRs will be designed, constructed, rehabilitated, operated, and maintained. The project roads will be constructed or rehabilitated to two-lane or intermediate-lane standards and will become part of the Rajasthan state highway network.<sup>13</sup>
- (ii) **Capacity development.** This component will build the RPWD's road asset management, road safety, and project management capacity. Consulting services will be engaged to help the RPWD's PPP division develop its capacity.<sup>14</sup>

16. The first tranche will deliver the following outputs:

- (i) **Road improvement.** About 1,000 km of state highways and MDRs in Rajasthan will be upgraded to two-lane or intermediate-lane standards.
- (ii) **Capacity development.** The capacity of the RPWD's PPP division will be built by preparing and piloting streamlined business processes and procedures covering road asset management, road safety, and project management. A project performance monitoring system will also be developed to manage PPP projects for roads.

## D. Investment and Financing Plans

17. The investment program is estimated to cost \$1,415 million, including taxes and duties, physical and price contingencies, interest, and other charges during implementation (Table 1).

**Table 1: Investment Program**  
(\$ million)

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Road improvement	1,292.14
2. Capacity development	18.65
<b>Subtotal (A)</b>	<b>1,310.79</b>
<b>B. Contingencies<sup>c</sup></b>	<b>81.07</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>23.14</b>
<b>Total (A+B+C)</b>	<b>1,415.00</b>

<sup>a</sup> Includes taxes and duties of \$25.29 million to be financed from Asian Development Bank (ADB) loan resources, and \$46.37 million from government resources by cash contribution. The amount of taxes and duties to be financed by ADB (i) is below the reasonable threshold identified during the country partnership strategy preparation process, (ii)

<sup>13</sup> Government of India, Planning Commission. 2007. *Two-Laning of State Highways through Public-Private Partnership: Manual of Specifications and Standards*. Delhi (IRC:SP:73-2007).

<sup>14</sup> The PPP division needs increased road asset management capacity because annuity and maintenance payments will be linked to the performance indicators on road conditions, safety, and level of services.

represents only 1.8% of the investment plan, and (iii) applies only to ADB-financed expenditures. The financing of taxes and duties is considered material and relevant to the project's success.

<sup>b</sup> In 2016 prices.

<sup>c</sup> Physical contingencies computed at 2% for civil works. Price contingencies computed at about 1.5% on foreign exchange costs and 5%–6% on local currency costs. Includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5-year swap London interbank offered rate, plus a spread of 0.5% for the ordinary capital resources loan. Commitment charges for the ADB loan are 0.15% per year, to be charged on the undisbursed loan amount.

Source: ADB.

18. The government has requested an MFF in an amount up to \$500 million from ADB's regular ordinary capital resources to help finance a part of the investment program.<sup>15</sup> The MFF will consist of two tranches, subject to (i) the government's submission of related periodic financing requests; (ii) the execution of the related loan and project agreements for each tranche; and (iii) the fulfillment of the terms, conditions, and undertakings set forth in the framework financing agreement. About \$450 million for civil works will be financed by private concessionaires and will be structured under the design–build–operate model and/or maintenance–transfer model.<sup>16</sup> The government will provide \$465 million in counterpart financing for O&M under the concessions and/or contracts, consulting services, taxes and duties, and project management. In the event that the concessionaires' financing does not materialize, the government will fund any financing gaps. The financing plan is in Table 2.

**Table 2: Financing Plan**

Source	Amount		Total	
	Tranche 1 (\$ million)	Tranche 2 (\$ million)	Amount (\$ million)	Share of Total (%)
Asian Development Bank				
Ordinary capital resources (regular loan)	220.0	280.0	500.0	35.3
Private Sector and/or Concessionaires	215.0	235.0	450.0	31.8
Government	220.0	245.0	465.0	32.9
<b>Total</b>	<b>655.0</b>	<b>760.0</b>	<b>1,415.0</b>	<b>100.0</b>

Source: Asian Development Bank.

19. **Tranche 1.** The first tranche of the MFF is estimated to cost \$655 million, with ADB financing of \$220 million. It will have a 25-year term, including a grace period of 8 years, annuity-type repayment based on a 5% discount factor, an annual interest rate determined in accordance with ADB's London interbank offered rate-based (LIBOR) lending facility, an annual commitment charge of 0.15%, and such other terms and conditions set forth in the draft loan and project agreements.<sup>17</sup> Based on this, the average loan maturity is 17.92 years and the maturity premium payable to ADB is 0.20% per annum.

<sup>15</sup> During the construction period, the concessionaires and contractors will receive lump-sum payments based on the achievement of each milestone as per the concessions or contracts. The ADB loan will finance the milestone payments during the construction period. ADB will finance eligible expenditures up to 100% of every claim it receives, as long as sufficient undisbursed loan amounts remain. If the remaining amount is not sufficient to cover 100% of the claim, only the remaining amount will be disbursed. The associated risks and control mechanism are described in the financial management section of the FAM.

<sup>16</sup> The government will pay 50% of the construction costs to the concessionaire during the construction period. During the construction period, the concessionaire will be required to finance the remaining 50% of the construction costs, which will be disbursed, along with interest, as annuity payments in 20 biannual instalments spread over 10 years, starting from the date when commercial operations commenced. The procurement of annuity-based PPP concession is at an advanced stage, with three packages already having completed the evaluation process.

<sup>17</sup> Periodic Financing Request for Project 1 (accessible from the list of linked documents in Appendix 2).

## E. Implementation Arrangements

20. The implementation arrangements for the investment program are summarized in Table 3 and described in detail in the facility administration manual (FAM).<sup>18</sup>

**Table 3: Implementation Arrangements**

Aspects	Arrangements		
Implementation period	May 2017 – March 2024		
Estimated completion date	31 March 2022 (first tranche); the first tranche will close on 30 September 2022, while the MFF will close on 30 September 2024.		
Management			
(i) Oversight body	Empowered Committee for Road Projects, Government of Rajasthan		
(ii) Executing agency	Government of Rajasthan through the RPWD		
(iii) Key implementing agency	RPWD		
(iv) Implementation unit	The PPP division of the RPWD, 41 staff		
Procurement	International competitive bidding	8–10 contracts	About \$1,284 million
Consulting services	Project management consultants (QCBS 80:20)	About 132 international and 292 national person-months (2 contracts)	About \$10 million
Retroactive financing and/or advance contracting	Retroactive financing and/or advance contracting will be used for goods, civil works, and consulting services financed by the first tranche.		
Disbursement	The loan proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed upon by the government and ADB.		

ADB = Asian Development Bank, MFF = multitranche financing facility, PPP = public–private partnership, RPWD = Public Works Department of the Government of Rajasthan, QCBS = quality- and cost-based selection.

Source: Asian Development Bank.

## III. DUE DILIGENCE

### A. Technical

21. The engineering designs are optimized for economy, construction efficiency, and road safety following applicable international and national design standards. The construction method will use proven technology and standard materials compatible with local conditions. The first tranche includes the following civil works contracts: (i) three annuity-based PPP concessions, including the construction and a 10-year commercial operation period; and (ii) one EPC contract for construction and 5 years of performance-based maintenance. A dedicated road safety consultant will be engaged for each concession or contract to undertake road safety audits during the design, construction, and maintenance stages. Climate risks of the project roads have been assessed and addressed in the environmental management plan (EMP).

### B. Economic and Financial

22. Economic analysis for the first tranche was carried out by comparing the societal cost of transportation with and without the project, taking into consideration the benefits of improved levels of service on the project road sections. The project benefits will include reduced vehicle operating costs, travel time, accidents, vehicle emissions, and congestion at some of the built-up areas that will be provided with bypasses. The economic internal rate of return (EIRR) (taking into

<sup>18</sup> Facility Administration Manual (accessible from the list of linked documents in Appendix 2).

consideration vehicle operating cost and travel time savings) is estimated at 17.4%, indicating that the investment is viable in social cost–benefit terms. The EIRR for individual road sections is 14.0%–20.8%. A sensitivity analysis testing the effects of possible unfavorable scenarios resulting from changes in the key parameters that determine the project costs and benefits indicated that the economic viability remained satisfactory, with an EIRR of 13.1% or above.

23. The project roads will be developed with the concessionaires or contractors responsible for maintenance over an extended period. The state government plans to collect user fees for all road sections under the SHDP (para. 10). It has announced the toll rates, and started toll collection on a number of state highways. Financial analysis found that project roads under the first tranche would generate sufficient liquid cash resources to allow the project to fully meet its O&M costs and contribute to the maintenance needs of the state highways. The state government has consistently used its budget well in 2011–2015 by fully executing the approved budget for planned maintenance, and has committed to funding project O&M in case user fees are not collected.

### C. Governance

24. **Financial management.** An assessment of financial management has been undertaken. The state government has established financial management systems in its agencies such as the RPWD. The risk is rated as *moderate*, primarily due to a lack of proper internal audits, delays in completing the external audit, and the RPWD’s lack of experience in implementing ADB-funded projects. A financial management specialist will be recruited to strengthen the RPWD’s financial management capacity. The investment program will provide training on and support for ADB procedures and financial management systems. The FAM details the risks and related mitigating measures, based on which the financial management arrangements are considered adequate.

25. **Procurement and anticorruption.** The civil works will be procured through annuity-based PPP concessions or EPC contracts, and will be undertaken following ADB’s Procurement Guidelines (2015, as amended from time to time). Consultants will be recruited following ADB’s Guidelines on the Use of Consultants (2013, as amended from time to time). Annuity-based PPP concessions and EPC contracts financed by ADB will use a procurement process and bidding documents that follow ADB policies and will include a policy statement on avoiding corrupt practices. The bidding documents, concession agreements, and contract agreements developed by the Government of India may be used as appropriate and with necessary revisions on eligibility, safeguards, anticorruption, and other factors to meet ADB procurement requirements. The government will publish information relating to the investment program—including business opportunities and information on the procurement of goods, works, and consulting services—on the RPWD’s website. The capacity development component will help the RPWD improve its business process and project monitoring system, which will also help enhance good governance. ADB’s Anticorruption Policy (1998, as amended to date) was discussed with the national and state governments. The specific policy requirements and supplementary measures are in the FAM.

### D. Poverty and Social

26. The project roads under the first tranche spread across Rajasthan’s rural areas, which are characterized by the predominance of traditional farming and a lack of reliable road connectivity, which limits access to health and education institutions, commercial facilities, and government development agencies. The 1,199 surveyed households along the project roads indicated that poor road conditions prevent safe and reliable travel, especially at night and during bad weather. These communities indicated that positive benefits will include (i) improved access to health and

education facilities, (ii) faster access to marketplaces, (iii) increased job opportunities, and (iv) better public and private transport options. An efficient road network connecting villages, towns, and cities will provide stronger links between rural communities and urban hubs. Road development encourages other development initiatives that can stimulate economic growth. The improvements are expected to improve the socioeconomic situation and reduce poverty significantly in the beneficiary districts and the state. The first tranche roads will pass through 156 villages in 15 districts where about 39.5 million people reside.

27. **Gender and development.** Except for those in very poor households, rural women in project areas rarely engage in outside work. The project will improve connectivity and provide women with better access to health services, higher levels of education, economic opportunities, and social interaction. Land acquisition and resettlement will affect 22 households headed by women. Special attention will be given to these households to ensure that their situation is the same as or better than pre-project levels. For first tranche project roads, implementable gender-proactive features include (i) constructing (a) more than 150 bus stop shelters in locations that will be finalized after community consultations, (b) 2 km of raised sidewalk, and (c) more than 90 km of hard shoulder that will benefit pedestrians, especially the elderly, women, and children; (ii) integrating into the road design safety features for the elderly, women, children, and people with disabilities, such as proper signage and marked crossings throughout the alignment; (iii) promoting road safety and safe mobility campaigns in affected communities (with a target audience of 50% women); (iv) conducting awareness-building sessions for HIV/AIDS, basic health and hygiene, and human trafficking in project-affected villages (with a target audience of 50% women); and (v) encouraging civil works contractors to engage women as wage laborers and ensure equal pay for equal work. The contracts include provisions to ensure compliance with all applicable labor laws, including not employing children or forced labor for construction, encouraging increased employment of women and local poor people, and paying men and women the same wages for work of equal value.

28. **HIV/AIDS and trafficking.** Based on an assessment by the National AIDS Control Organisation of the Ministry of Health and Family Welfare and the State AIDS Prevention and Control Society, Rajasthan has an estimated adult HIV prevalence of 0.32%, which is lower than the national prevalence of 0.35%. Key efforts on awareness-building, prevention, and treatment are being undertaken by the health department and the Rajasthan AIDS Control Society in the states, districts, and blocks. Government initiatives and mitigating measures are in place to address all health and social risks and impacts associated with infrastructure development in the project area. The poverty and social assessment indicated that the project will not increase HIV incidence, as all improved roads will be along the existing corridor. The RPWD will ensure that civil works contractors conduct awareness programs on HIV/AIDS, human trafficking, and child labor at construction campsites and workplaces. All contracts will have clauses concerning these initiatives, and the state government will monitor compliance during implementation. The concessionaires or contractors will conduct awareness-raising activities on HIV/AIDS, basic hygiene, and human trafficking in villages along the project roads.

## E. Safeguards

29. **Involuntary Resettlement.** A resettlement framework has been prepared to guide the screening and preparation of subprojects.<sup>19</sup> The first tranche is classified as category A for involuntary resettlement following ADB's Safeguard Policy Statement (2009). The engineering design was optimized to minimize land acquisition. Four resettlement plans corresponding to the

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<sup>19</sup> Resettlement Framework (accessible from the list of linked documents in Appendix 2).

civil works packages have been prepared following India's Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Act, 2013 and ADB's Safeguard Policy Statement, and have been disclosed on ADB's website.<sup>20</sup> About 237 hectares of private land will be acquired, which will affect 781 private structures. In total, 2,994 households comprising 18,411 people will be impacted, of which 1,292 households will experience economic displacement and 217 households will experience physical displacement. The displaced households will be entitled to replacement compensation, shifting cost, and other income restoration assistance for the loss of land and structures. Impacts have been thoroughly assessed and the proposed measures in the resettlement plans are commensurate with these. The RPWD is experienced in implementing projects funded by international development banks and has committed to provide resources to implement the resettlement plans in a timely manner. The RPWD will engage a nongovernment organization to assist with the implementation of the resettlement plans, and the project management consultant's resettlement specialist will act as the external monitor.

30. **Indigenous peoples.** The first tranche is classified as category C following the Safeguard Policy Statement. Due diligence has confirmed that there are no indigenous peoples groups in the project area. An indigenous peoples planning framework has been prepared.<sup>21</sup>

31. **Environmental impact.** An environmental assessment and review framework has been prepared.<sup>22</sup> The first tranche is classified as category B following the Safeguard Policy Statement. Most of the adverse impacts are coterminous with the construction stage, site-specific, limited within the right-of-way, and easily mitigated. Anticipated environmental impacts under the first tranche entail typical road construction-related issues such as the generation of dust, noise, exhaust, and waste from construction and worker camps; water contamination; restrictions on animal movement; and occupational health and safety hazards. The EMP included mitigation measures. To minimize adverse impacts on the movements of animals such as the *chinkara*, *nilgai*, and road users, particularly in the Thar Desert, the road design includes signboards and pipes turned into box culverts with vegetation camouflage to serve as underpasses. The number of trees cut down was minimized through eccentric road widening along "green tunnels" where adequate RPWD land is available. A road-specific EMP and concomitant costs are part of the bidding documents. Meaningful consultations with key environmental agencies, roadside communities, and nongovernment organizations were conducted during the project preparation stage, and all concerns of the affected persons and stakeholders were incorporated in the initial environmental examination and EMP.<sup>23</sup> An integrated social and environmental grievance redress mechanism has been formed to continue receiving feedback and complaints from affected parties and addressing them during the construction and operation stages. The initial environmental examination is disclosed on the ADB and RPWD websites.

## F. Risks and Mitigating Measures

32. The overall risk assessment is *moderate* without mitigation and *low* with mitigation. Integrated benefits and impacts are expected to outweigh costs. Major risks and mitigating measures are described in Table 4, while a complete assessment is in the risk assessment and risk management plan.<sup>24</sup>

<sup>20</sup> Resettlement Plans (accessible from the list of linked documents in Appendix 2).

<sup>21</sup> Indigenous Peoples Planning Framework (accessible from the list of linked documents in Appendix 2).

<sup>22</sup> Environmental Assessment and Review Framework (accessible from the list of linked documents in Appendix 2).

<sup>23</sup> Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

<sup>24</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

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

<b>Risks</b>	<b>Risk Assessment</b>	<b>Mitigating Measures</b>
Safeguards noncompliance	Substantial	Before starting construction, a due diligence mission will be fielded to ensure safeguards compliance and create awareness among the project stakeholders about the Asian Development Bank's pertinent safeguard requirements (timeline: during project implementation).
Implementation delay	High	The implementation delay is likely caused by slow land acquisition and resettlement or the procurement progress. For the first tranche, the RPWD initiated land acquisition and resettlement in April 2016, and the procurement of civil works in January 2016 (timeline: ongoing).

RPWD = Public Works Department of the Government of Rajasthan.

Source: Asian Development Bank.

#### **IV. ASSURANCES**

33. The central government, state government, and RPWD have assured ADB that the project's implementation 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 FAM and loan documents.

34. The central government, state government, and RPWD have given ADB certain undertakings for the MFF, which are set forth in the framework financing agreement. Specific covenants agreed upon by the central government and the state government with respect to individual tranches under the MFF are set forth in the loan and project agreements for the respective tranches.

#### **V. RECOMMENDATION**

35. I am satisfied that the proposed multitranche financing facility would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the multitranche financing facility to India for the Rajasthan State Highway Investment Program in an aggregate principal amount not exceeding the equivalent of \$500,000,000, which comprises the provision of loans from ADB's ordinary capital resources, with interest and other terms to be determined in accordance with ADB's London interbank offered rate-based lending facility, and is subject to such other terms and conditions as are substantially in accordance with those set forth in the framework financing agreement presented to the Board.

Takehiko Nakao  
President

12 April 2017

## DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

<b>Impact the Program is Aligned with:</b>			
Good quality connectivity in all areas provided (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>
<b>Outcome</b> Efficiency and safety of transport on the state highways of Rajasthan improved	By 2025 a. Use of the built roads averaging 10.184 million vehicle-km per day (2016 baseline: 6,316 million)  b. Road safety audit mainstreamed in the business process of the RPWD's PPP division (2016 baseline: Not mainstreamed)	a. The RPWD database  b. Operation manuals of the RPWD PPP division	Inadequate arrangements for road maintenance and operation
<b>Outputs</b>  1. State highways and major district roads improved   2. Capacity of the RPWD enhanced	By 2022 1. 2,000 km of the state highways and major district roads in Rajasthan improved and maintained under performance-based contracts (2016 baseline: 0)  By 2024 2a. Streamlined business process of the PPP division implemented (2016 baseline: Not implemented)  2b. Project performance monitoring system implemented (2016 baseline: Not implemented)	1–2. RPWD project progress reports	Limited interest of the construction industry in the works  Delay in land acquisition and utility shifting due to the preparation and implementation of resettlement plans
<b>Key Activities with Milestones</b> <b>1. State highways and major district roads improved</b> 1.1 Recruit all independent engineers and road safety consultants by Q3 2020 1.2 Procure all civil works by Q4 2020 1.3 Implement and complete all civil works by Q4 2024 <b>2. Capacity of the RPWD enhanced</b> 2.1 Recruit consultants for capacity development by Q3 2017 2.2 Review the business process of the PPP division and propose a streamlining action plan by Q2 2018 2.3 Complete the design of a project performance monitoring system by Q4 2018 2.4 Implement the streamlined business process and project performance monitoring system by Q4 2024			

**Inputs**

ADB: \$500 million (loan)

Private sector: \$450 million (to be underpinned by appropriate support from the Government of Rajasthan)

Government of Rajasthan: \$465 million

**Assumptions for Partner Financing**

Not Applicable

ADB = Asian Development Bank, km = kilometer, PPP = public–private partnership, Q = quarter, RPWD = Public Works Department of the Government of Rajasthan.

<sup>a</sup> Government of India, Planning Commission. 2012. *Twelfth Five Year Plan, 2012–2017: Faster, More Inclusive and Sustainable Growth*. Delhi.

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=49228-001-3>

1. Loan Agreement
2. Project Agreement
3. Framework Financing Agreement
4. Periodic Financing Request for Project 1
5. Sector Assessment (Summary): Transport, Information and Communication Technology (Road Transport)
6. Facility Administration Manual
7. Contribution to the ADB Results Framework
8. Development Coordination
9. Economic and Financial Analysis
10. Country Economic Indicators
11. Summary Poverty Reduction and Social Strategy
12. Initial Environmental Examination
13. Environmental Assessment and Review Framework
14. Resettlement Plan: Package 1
15. Resettlement Plan: Package 2
16. Resettlement Plan: Package 3
17. Resettlement Plan: Package 4
18. Resettlement Framework
19. Indigenous Peoples Planning Framework
20. Risk Assessment and Risk Management Plan

**Supplementary Documents**

21. Comparison of Financing Modality for the Proposed Rajasthan State Highway Investment Program
22. Annuity-Based Public–Private Partnership Model
23. Project Climate Risk Assessment and Management Report