Report and Recommendation of the President to the Board of Directors

Project Number: 49191-001
March 2016

Proposed Loan
Islamic Republic of Pakistan: Post-Flood National Highways Rehabilitation Project

Asian Development Bank

CURRENCY EQUIVALENTS
(as of 4 March 2016)

Currency unit	–	Pakistan rupee/s (PRe/PRs)
PRe1.00	=	$0.009551
$1.00	=	PRs104.7000

ABBREVIATIONS

ADB	–	Asian Development Bank
DMU	–	disaster management unit
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
ESU	–	environment and social unit
km	–	kilometer
LIBOR	–	London interbank offered rate
NHA	–	National Highway Authority
PAM	–	project administration manual
PMU	–	project management unit
PSC	–	project steering committee
ROW	–	right-of-way

NOTE

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

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PROJECT AT A GLANCE

1. Basic Data — **Project Number:** 49191-001

Project Name	Post-flood National Highways Rehabilitation Project	**Department /Division**	CWRD/PRM
Country	Pakistan	**Executing Agency**	National Highway Authority
Borrower	Islamic Republic of Pakistan		

2. Sector	**Subsector(s)**	**ADB Financing ($ million)**
✓ **Transport**	Road transport (non-urban)	196.90
	Total	**196.90**

3. Strategic Agenda	**Subcomponents**	**Climate Change Information**	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change impact on the Project	High
Environmentally sustainable growth (ESG)	Disaster risk management		
Regional integration (RCI)	Pillar 2: Trade and investment		

4. Drivers of Change	**Components**	**Gender Equity and Mainstreaming**	
Governance and capacity development (GCD)	Institutional development Organizational development	No gender elements (NGE)	✓
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas		

5. Poverty Targeting		**Location Impact**	
Project directly targets poverty	No	Nation-wide	High

6. Risk Categorization: Low

7. Safeguard Categorization **Environment:** B **Involuntary Resettlement:** C **Indigenous Peoples:** C

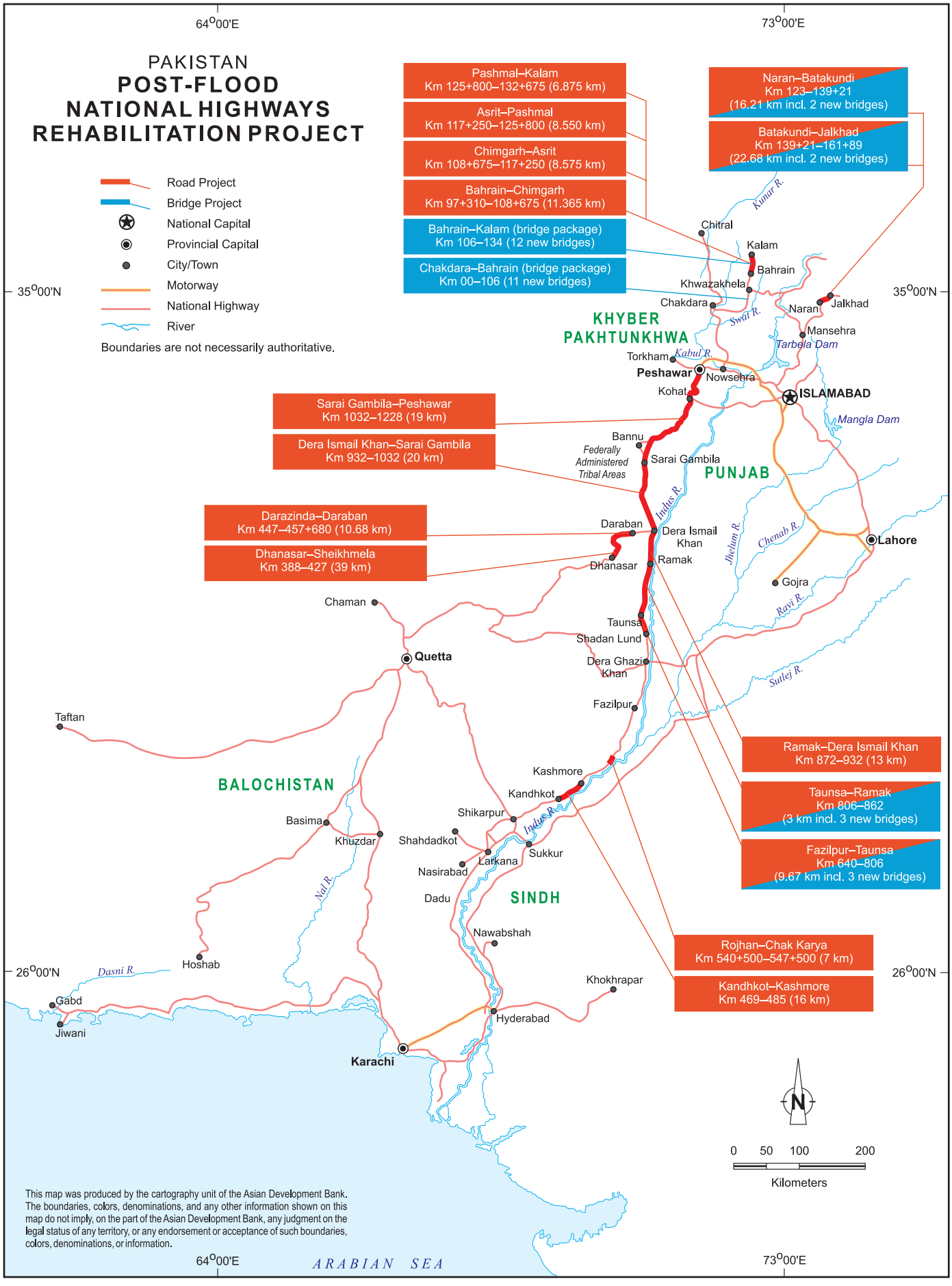
8. Financing

Modality and Sources	**Amount ($ million)**
ADB	**196.90**
Sovereign Project loan: Ordinary capital resources	196.90
Cofinancing	**0.00**
None	0.00
Counterpart	**21.90**
Government	21.90
Total	**218.80**

9. Effective Development Cooperation

Use of country procurement systems	No
Use of country public financial management systems	Yes

Source: Asian Development Bank



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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Islamic Republic of Pakistan for the Post-Flood National Highways Rehabilitation Project.[1]

2. The proposed rehabilitation project includes 212 kms of damaged highway sections and 33 damaged bridges located on the national highway network of Pakistan. It will restore critical physical infrastructure to sustain livelihoods and access to markets, as well as build post-disaster traffic management capacity in the National Highway Authority (NHA). The project will contribute to the economic recovery of 2010 flood affected areas in Khyber Pakhtunkhwa, Punjab, and Sindh provinces.

II. THE PROJECT

A. Rationale

3. Pakistan's transport sector contributes about 10% to the country's gross domestic product, accounts for about 35% of total energy consumption annually, and receives 20%–25% of the annual federal public sector development program. It provides an estimated 2.3 million jobs (5.9% of the employed labor force). Although comprising less than 5% of the total road network (about 263,000 km), the national highway network (about 12,500 km) caters to 80% of commercial traffic.[2] Despite the high reliance on road transport—accounting for 92% of passenger traffic and 96% of freight traffic in Pakistan—the quality of the road infrastructure causes severe capacity constraints.

4. Before 1995, Asian Development Bank (ADB) assistance to Pakistan had focused on improvement of rural access roads to complement ADB's then focus on agriculture sector development. From 1995, the perspective was expanded to national connectivity for economic growth in general, covered provincial and national highways. Since 2005, ADB assistance has focused on the trade corridor and regional connectivity, and two multitranche financing facilities provided in 2005 and 2007 were designed for key trade corridors connecting seaports, industrial centers, and border crossing points.[3]

5. In parallel, ADB has supported the government in addressing institutional constraints. ADB's program loan provided in 2001 for the national sector policy reform program assisted the NHA in implementing reform programs covering (i) transport policy, (ii) road sector resource management, (iii) road sector preservation, (iv) institutional efficiency improvement, and (v) road safety.[4] Through such reforms, the NHA has managed to (i) establish the road maintenance fund for stable road maintenance expenditure; (ii) establish the road asset management system, to prioritize scarce resources; (iii) establish the National Highway and Motorway Police, which contributes to controlling overloading, and thus reduce premature deterioration of highways; (iv) promote awareness on road safety; and (v) explore public–private partnerships.

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[1] The design and monitoring framework is in Appendix 1.

[2] Asian Development Bank (ADB). 2015. *Country Partnership Strategy: Pakistan, 2015–2019.* Manila.

[3] ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility and Loan to the Islamic Republic of Pakistan for the National Highway Development Sector Improvement Project.* Manila; and ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility and Technical Assistance Grant to the Islamic Republic of Pakistan for the National Trade Corridor Highway Improvement Program.* Manila.

[4] ADB. 2001. *Report and Recommendation of the President to the Board of Directors: Proposed Loans to the Islamic Republic of Pakistan for the Road Sector Development Program.* Manila.

6. However, sector reforms should continue, particularly to address (i) the shortfall in road maintenance resources (by expanding the toll base and rationalizing the toll rates); (ii) overloading (through modernizing the aging truck fleet with emphasis on high-capacity, multi-axle trucks); (iii) road safety (through concerted national and provincial efforts); and (iv) public–private partnership (by reducing the country risk for private investors to price it properly). In November 2015, ADB approved capacity development technical assistance of $15.4 million to Pakistan as part of the Government of the United Kingdom's assistance through the Pakistan Economic Corridors Program[5] to help strengthen transport facilitation for cross-border transport, advance the national road safety program, develop a national transport policy and master plan, and scale up road asset management.

7. The challenges faced by the transport sector have been exacerbated by the increasing frequency and severity of natural hazard events, and the potential impact of climate change. Since the 2000s, Pakistan has repeatedly been hit by a series of heavy monsoon rains, which caused severe flooding in nearly all parts of the country. Lowlands around the Indus River basin, the Chenab and Jhelum rivers, and along the coastline were the most heavily affected. Severe flooding not only caused death and displacement of people but also destroyed property, livelihoods, and infrastructure—particularly transport infrastructure. These natural disasters pose new challenges to the NHA, which is already challenged by insufficient resources for road network development and maintenance. As a result, it has become difficult to pursue the nationwide road network development strategy and sector reforms consistently since planning is frequently disrupted by the need to provide scarce financial and human resources for emergency recovery of damaged road networks in fragile flood-hit areas. ADB's timely emergency assistance to the government was, in most cases, instrumental in rehabilitating destroyed property, and enabling communities to restore livelihoods.

8. The 2010 floods were the worst in Pakistan's history, affecting 100,000 square kilometers and 20 million people (more than a tenth of the country's population). They resulted in 1,800 deaths and caused an estimated $10 billion in total damage. Immediately after the floods subsided, the government started the early recovery and restoration of basic services, housing, and livelihoods. Basic transport infrastructure and irrigation facilities were also badly damaged in 80 of the country's 110 districts across Balochistan, Khyber Pakhtunkhwa, Punjab, and Sindh. According to the damage and needs assessment report prepared by ADB and the World Bank in conjunction with federal and provincial government agencies, 793 km of national highways (7% of the national highway network) were identified as requiring immediate rehabilitation to ensure their stability and public safety.[6]

9. In 2011, ADB approved the Flood Emergency Reconstruction Project in the amount of $650 million to assist the government in the reconstruction and rehabilitation of national highways, provincial roads, irrigation and drainage, and flood protection infrastructure.[7] The emergency reconstruction project became effective on 26 May 2011 and was closed on 25 May 2015. The project was originally intended to rehabilitate 793 km of national highways, as identified by the damage and needs assessment report (which classified 383 km as partially damaged and 410 km as fully damaged). Upon completion of the detailed survey and design, however, the affected length of national highways was expanded to 1,044 km and 46 bridges.

[5] ADB. 2015. *Technical Assistance to the Islamic Republic of Pakistan for Enabling Economic Corridors through Sustainable Transport Sector Developmen*t. Manila.

[6] ADB and the World Bank. 2010. *Pakistan Floods 2010: Preliminary Damage and Needs Assessment*. Islamabad.

[7] ADB. 2011. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to the Islamic Republic of Pakistan for the Flood Emergency Reconstruction Project*. Manila.

But the scope of the project was reduced to rehabilitate only 653 km of national highways. During implementation, the scope was further reduced to a prioritized length of 344 km, mainly because (i) bid prices were much higher than the estimates, (ii) considerable additional time was required to redesign some sections of the highways, and (iii) procurement was unsuccessful for some subprojects. The reduced scope of the project (i.e., 344 km) was completed when the loan was closed on 25 May 2015.[8] The NHA, through its own resources, is financing the reconstruction and/or repair of an additional 97 km.

10. The government has not been able to secure funding for the remaining 212 km of damaged highway sections and 33 bridges, which should be rehabilitated immediately to avoid further damage and safety hazard. These roads and bridges are the only transport links for the local population, which is being temporarily served through makeshift arrangements, such as Bailey bridges. ADB's post-flood assistance for the remaining 212 km of the damaged sections of the highways and 33 bridges will (i) expedite the economic and social recovery of the affected population from the floods and provide greater resilience to future floods, and (ii) ensure that the full development impact of the emergency reconstruction project is achieved and that ADB's intervention is effective. Apart from the recovery of damaged road infrastructure, the NHA's capacity to cope with such natural disasters and manage a quicker response for the early restoration of traffic and subsequent reconstruction and/or rehabilitation activities needs strengthening. Currently, NHA personnel perform this role on an ad hoc basis, without monitoring tools and specialized training in the management of road infrastructure in emergency situations. The NHA's disaster management capacity needs upgrading to be systematic, programmatic, and responsive.

11. Apart from its interventions in road infrastructure development in Pakistan, ADB has been active in post-natural-disaster emergency recovery initiatives in the country. In 2005, ADB supported the government's reconstruction efforts after the October 2005 earthquake through an emergency loan, grant, and technical assistance grant.[9] In 2011 and 2015, ADB assisted the government's reconstruction efforts after the 2010 and 2014 floods.[10] ADB gained valuable experience in implementing loans in response to natural disasters through these projects, including (i) designing projects with a manageable number of components and implementing agencies, (ii) ensuring counterpart funding capacity and soundness of project costing, and (iii) adopting realistic time frames for land acquisition and resettlement activities.

12. The rehabilitation project will restore critical physical infrastructure to sustain livelihoods and access to markets, as well as build capacity in the NHA by (i) providing specialized training to its operations staff for the efficient management of traffic restoration and post-natural-disaster reconstruction activities, and (ii) operationalizing DMUs. As a highway infrastructure project, it is consistent with ADB's Midterm Review of Strategy 2020[11] and country partnership strategy,

[8] Less 2 km under subproject ICB-N-03: Rehabilitation of Kohala–Muzaffarabad Road Package-1, for which work is ongoing, as a result of subsequent damage during the 2014 floods.

[9] ADB. 2005. *Report and Recommendation of the President to the Board of Directors: Proposed Loan, Pakistan Earthquake Fund Grant, and Technical Assistance Grant to the Islamic Republic of Pakistan for the Earthquake Emergency Assistance Project.* Manila.

[10] ADB. 2011. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to the Islamic Republic of Pakistan for the Flood Emergency Reconstruction Project.* Manila; and ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Islamic Republic of Pakistan for the Flood Emergency Reconstruction and Resilience Project.* Manila.

[11] ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific.* Manila.

2015–2019 for Pakistan (footnote 2). It is also a firm project for 2016 in ADB's country operations business plan, 2016–2018 for Pakistan.[12]

B. Impact and Outcome

13. The impact of the rehabilitation project will be economic and social recovery in the affected areas of the 2010 floods. The outcome will be efficient and safe movement of traffic on the national highways and efficient management of traffic restoration in emergencies.

C. Outputs

14. The outputs will include (i) 212 km of national highway network (and 33 bridges) repaired and rehabilitated, and (ii) DMUs established (in head office and 10 regional offices) and 15 DMU staff trained on post-disaster traffic management. These outputs will restore critical physical infrastructure to sustain livelihoods and access to markets, as well as build post-disaster traffic management capacity in the NHA.

D. Investment and Financing Plans

15. The project is estimated to cost $218.8 million (Table 1). ADB financing of $196.9 million will be required for the project. Detailed cost estimates are in the project administration manual (PAM).

Table 1: Project Investment Plan
($ million)

Item		Amount[a]
A. Base Cost[b]		
1.	Highway rehabilitation	188.5
2.	Capacity development for strengthening post-disaster traffic management	1.5
	Subtotal (A)	**190.0**
B. Contingencies[c]		**21.6**
C. Financing Charges During Implementation[d]		**7.2**
	Total (A+B+C)	**218.8**

ADB = Asian Development Bank.
[a] Includes taxes and duties of $13.9 million to be financed from government resources.
[b] In June 2015 prices.
[c] Physical contingencies computed at 10% for civil works. Price contingencies computed at 1.4%–1.5% on foreign exchange costs and at 5.5%–6.0%% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.
[d] Includes interest and commitment charges. Interest during construction for the ADB loan has been computed at the 5–year fixed swap rate against the 6-month London interbank offered rate (LIBOR) plus a spread of 0.5%. Commitment charges for the ADB loan are 0.15% per year to be charged on the undisbursed loan amount.
Source: Asian Development Bank staff estimates.

16. The government has requested a loan of $196.9 million 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, a custom-tailored repayment method, 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 (the interest and other charges during construction to be capitalized in the loan), and such other terms and conditions set forth in the draft loan and

[12] ADB. 2015. *Country Operations Business Plan: Pakistan, 2016–2018.* Manila.

project agreements. Based on this, the average loan maturity is 15.97 years and the maturity premium payable to ADB is 0.10% per annum.

17. The financing plan is in Table 2. The government will contribute $21.9 million of its own resources to finance part of the civil works and contingencies, as well as the taxes and duties.

Table 2: Financing Plan

Source	**Amount** ($ million)	**Share of Total** (%)
Asian Development Bank		
Ordinary capital resources (loan)	196.9	90.0
Government	21.9	10.0
Total	**218.8**	**100.0**

Source: Asian Development Bank staff estimates.

E. Implementation Arrangements

18. The NHA will be the executing agency. It has been implementing ADB-funded road projects and has the necessary capacity to manage project implementation. It will establish a project steering committee to provide policy direction and strategic oversight. The project management unit (PMU), established and staffed under the emergency reconstruction project,[13] will continue to be responsible for the day-to-day management of the rehabilitation project, through the project management consultants. Similarly, the environment and social unit (ESU) established within the PMU will continue to fulfill safeguard requirements. Financial management, safeguards management, and contract administration and project implementation capacity will be augmented through individual consultants recruited under the loan. The proposed composition of the PMU is detailed in the PAM. Within the NHA, the procurement and contract administration department will coordinate and undertake procurement.

19. As the NHA does not have the equipment or tools to monitor post-disaster traffic management, its post-disaster traffic management capacity will be strengthened under a proposed two-pronged strategy. First, one international individual consultant will be engaged to (i) assist the NHA in preparing the necessary documentation and obtaining approvals for establishing DMUs, (ii) develop (for NHA approval) the standard operating procedures for DMUs, (iii) identify training sessions for NHA's nominated DMU staff through external training agency(ies) and/or individual accredited professionals, and (iv) identify software and/or hardware to be procured (provide the required details and specifications) for establishing DMUs. Second, (i) the NHA's nominated operations and dedicated staff will be trained on post-disaster traffic management, and (ii) necessary hardware and/or software for the establishment of DMUs will be procured. The NHA will retain the trained staff for post-disaster traffic management activities.

20. Procurement of goods, works, and services will follow ADB's Procurement Guidelines (2015, as amended from time to time) and Guidelines on the Use of Consultants (2013, as amended from time to time). An initial procurement plan for the rehabilitation project is in Table 3. The contracts were packaged based on an assessment of the site area in view of the construction season and geographical location. In this procurement plan, of the 17 civil works packages, six contracts in two packages will be procured through international competitive bidding and 11 contracts through five packages will be procured through national competitive

[13] The emergency reconstruction project's PMU is staffed and functional until June 2016, which is the end of the defects notification period for contracts under the project. The NHA has confirmed that the same PMU will be retained to implement the rehabilitation project.

bidding. A firm will be recruited to provide construction supervision through a 90:10 quality- and cost-based selection method. The NHA requested retroactive financing and advance contracting, which has been adopted. Retroactive financing will be in accordance with the Operations Manual on Retroactive Financing.[14] Retroactive financing for individual consultants will be executed through reimbursement arrangements under ADB's *Loan Disbursement Handbook* (2015, as amended from time to time). The government and the NHA have been advised that approval of advance contracting does not commit ADB to finance the project.

21. The implementation arrangements are summarized in Table 3 and described in detail in the PAM.[15]

Table 3: Implementation Arrangements

Aspects	**Arrangements**		
Implementation period	October 2016–September 2020		
Estimated completion date	30 September 2020 (Loan closing date is 31 March 2021)		
Management			
(i) Oversight body	NHA project steering committee led by a chairperson, with high-ranking officials from the NHA and the economic affairs division as members.		
(ii) Executing agency	NHA		
(iii) Implementation unit	Under the NHA with 29 staff		
Procurement	International competitive bidding	6 contracts in 2 packages	$103.3 million
	National competitive bidding	11 contracts in 5 packages	$74.0 million
	Shopping: goods (e.g., equipment, software, hardware)	Multiple contracts	$0.5 million
Consulting services	90:10 quality- and cost-based selection method	1,008 person-months	$8.5 million
	Individual consultants	150 person-months	$1.0 million
	Training programs[a]	Multiple contracts	$1.0 million
Retroactive financing and/or advance contracting	Advance contracting for civil works, supervision consultants, and individual consultants. Retroactive financing for individual consultants up to $250,000 of the loan amount, provided that the expenditures are incurred before loan effectiveness but no earlier than 12 months before the signing of the loan agreement.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time) and detailed arrangements agreed between the government and ADB. Payments for civil works, goods, and consultants will be made through direct payment, reimbursement, and imprest account procedures.		

ADB = Asian Development Bank, NHA = National Highway Authority.
[a] To be determined during project implementation.
Sources: Asian Development Bank and National Highway Authority staff estimates.

III. DUE DILIGENCE

A. Technical

22. The existing highway sections will be reconstructed and/or rehabilitated to NHA specifications for national highways with carriageway width of 7.3 meters and 1.0–3.0-meter

[14] ADB. 2006. Retroactive Financing. *Operations Manual*. OM H4/BP. Manila.
[15] Project Administration Manual (accessible from the list of linked documents in Appendix 2).

shoulders. The design speed is 80–110 km per hour in plain terrain with a maximum grade of 3%, and 40–60 km per hour in hilly terrain with a maximum grade of 8%. The scope of construction work includes earthwork and pavement works, and roadside improvements and safety engineering features, such as traffic signs, road markings, traffic barriers, and guard rails. In addition, slope protection works, as and where required, will be carried out. For the proposed highway sections, the detailed design of road pavement, road geometrics, and bridge structures has been prepared in accordance with acceptable international practices, while incorporating the build back better concept. The pavement design is based on the Transport Research Laboratory's Overseas Road Note 31.[16] The geometric design is based on the American Association of State Highway and Transportation Officials policy on geometric design of highways and streets.[17] Bridges are designed in accordance with the West Pakistan Code of Practice for highway bridges 1967,[18] and conform to the American Concrete Institute Code of Practice.[19]

B. Economic and Financial

23. The economic and financial analysis concluded that the rehabilitation project is economically viable, with an economic internal rate of return (EIRR) of 20%. Economic analysis was undertaken at subproject level, with the EIRR estimated separately for the N-95, N-55, N-15, and N-50 sections. The analysis showed the N-55, N-15, and N-50 sections had EIRRs in excess of the 12% threshold. The N-95 is justified by significant non-monetized benefits from reduced flood risk and improved resilience to climate change. Sensitivity testing showed that the project is not very sensitive to reasonable changes in demand or investment cost.

24. The rehabilitation project is nonrevenue earning, and an adequacy assessment notes that the NHA has the resources to sustain its operation and management. The allocation for road maintenance from the federal budget has been insufficient, and while the road maintenance fund has provided stable contributions, funding remains inadequate. The project will help reduce the maintenance expenditure through rehabilitation and capacity enhancement, creating savings for the NHA budget. At the same time, the NHA's planned optimization of its toll collection would increase the existing road maintenance fund, making the national highway and motorway network more sustainable in the long term.

C. Governance

25. A financial management assessment of the NHA, carried out in May 2015, confirmed that it has sufficient capacity to manage and maintain the accounting systems, financial controls, and audit arrangements required for the project. The NHA's financial accounting, auditing rules, and internal control systems follow generally accepted international accounting and auditing practices. The NHA maintains separate project records and accounts to identify the works, goods, and services financed from the loan proceeds, financing resources received, expenditures incurred for the project, and use of counterpart funds, including adequate internal controls and financial reporting arrangements. The project accounts and related financial statements will be audited annually in accordance with national and international auditing standards by the Auditor General of Pakistan and by an independent chartered accountant firm.

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[16] Overseas Centre, Transport Research Laboratory. 1993. *Overseas Road Note 31: A guide to the structural design of bitumen-surfaced roads in tropical and sub-tropical countries*. Berkshire, United Kingdom.
[17] American Association of State Highway and Transportation Officials. 2011. *A Policy on Geometric Design of Highways and Streets*. Washington, DC.
[18] Government of West Pakistan, Highway Department. 1967. *Code of Practice: Highway Bridges.* Lahore.
[19] American Concrete Institute. 2011. *Manual of Concrete Practice.* Farmington Hills, United States.

26. A procurement risk assessment of NHA, carried out in June 2015, assessed the procurement risk as *moderate*.[20] It identified the main procurement management challenges for the NHA as (i) weak coordination between various departments, (ii) complex bureaucratic systems causing project start-up delays, and (iii) multiple layers of review and approving authorities. To mitigate these risks, advance procurement has been sought and a loan-financed procurement consultant will be recruited to assist the NHA in overcoming any delays. The procurement consultant will assist in the timely preparation of procurement documents and avoid delays through strong coordination between various departments. The project procurement risk is classified category B.

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

D. Poverty and Social

28. Pakistan has a 33% national poverty rate, with 21% of the population living below the extreme poverty line.[21] Social and gender dimensions of the proposed project are classified as general intervention. The project has indirect social and poverty impacts, so dedicated action plans will not be required. Based on the review of secondary information and data shared by the NHA, the proposed project will offer significant benefits for the affected population, including safety in mobility, lowered transportation costs, reduced travel time, reduced transportation time for edible and perishable agriculture products, and increased returns from the tourism industry. The project will offer significant employment opportunities in construction and other related services. The project will improve the quality of post-disaster response and provide immediate relief to local commuters and the public in case of future flooding.

29. The project does not offer direct gender benefits. Given better connectivity and increased access to social services, such as health, education, and other economic opportunities, the proposed project will indirectly benefit women and girls. According to ADB's gender mainstreaming guidelines, the project is classified as no gender elements and does not require a gender action plan. However, the project will undertake certain measures during project implementation to ensure that women's issues and concerns are addressed and that women are not adversely impacted.[22]

30. The HIV prevalence rate in the country is 0.10%. However, the potential risks of increased transmission of HIV and other sexually transmitted infections and/or communicable diseases are always a concern. The main modes of HIV transmission include sexual transmission, unsafe blood transfusion, and intravenous drug use. Information about the risks of spreading HIV has not been widely disseminated, and practices related to blood transfusion screening and intravenous drug use are also not well regulated, particularly in rural areas. While there is no evidence suggesting that the project will increase HIV incidence during or after implementation, any associated risks will be minimized through awareness campaigns targeting construction workers and local populations. The contractor will conduct the campaigns, with

[20] ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Administration of Grant to the Islamic Republic of Pakistan for the National Motorway M-4 Gojra–Shorkot Section Project.* Manila.

[21] A. Naveed and N. Ali. 2012. *Clustered Deprivation: District Profile of Poverty in Pakistan.* Islamabad: Sustainable Development Policy Institute.

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

oversight by the supervision consultant and the NHA. Such requirement will be included in the civil works contract.

E. Safeguards

31. The project is classified category C for both involuntary resettlement and indigenous peoples. Due diligence performed during the fact-finding mission confirmed that (i) the proposed sections of the national highways and 33 bridges fall within the existing right-of-way (ROW) owned by the NHA; and (ii) detailed designs have been completed and reviewed by the NHA's design review consultants, based on which new land acquisition is not expected for bridges (to be constructed within the existing ROW) or for the carriageway of the highway sections.

32. A follow-up due diligence review conducted by ADB and the NHA in December 2015 confirmed that while there are some encroachments to the ROW in a few sections of the roads and bridges to be rehabilitated, impacts on these structures can be avoided with minor adjustments to the rehabilitation works similar to the approach taken under the emergency reconstruction project. Such flexibility will be indicated in the civil works contracts and will be closely monitored during implementation by a resettlement specialist to be engaged by the PMU. The NHA has prepared a land acquisition and resettlement framework as an additional safeguard measure in case of unforeseen impacts during project implementation.

33. The project has been categorized B for environment. An initial environmental examination study has been performed to meet the requirements of ADB's Safeguard Policy Statement (2009) and new national legal requirements, which was disclosed on ADB's website on 26 October 2015. Climate change risks and mitigation measures and community concerns have been considered in the project design. The environment of the candidate highway sections and bridges is affected. Rehabilitation of these highway sections and bridges will require limited civil works across various sections of the highway alignments. The environmental impacts of the rehabilitation activity, such as soil erosion, dust, and noise impacts will be limited to the construction phase. The environmental management plan (EMP) will include measures to minimize anticipated impacts during the construction phase. Prior to the construction of each road section or bridge, contractors will update the EMP and incorporate it into a site-specific environmental management plan, which will be based on a risk assessment approach to select mitigation measures appropriate for the impact and site. The construction supervision consultant, the ESU of the NHA, and ADB will closely monitor implementation of the site-specific environmental management plan. The NHA will submit semiannual environmental monitoring reports to ADB for disclosure on the ADB website.

34. The NHA's PMU and ESUs that worked on the emergency reconstruction project will also be responsible for managing this project. The units have full-time environment and social safeguards staff with sufficient experience of and familiarity with the ADB Safeguard Policy, and will be assisted by a safeguards team from the project supervision consultants and a loan-financed individual safeguards consultant.

F. Risks and Mitigating Measures

35. On completion, the efficient and safe movement of traffic on the rehabilitated project sections will contribute to the economic and social recovery of the affected population. This is

expected to outweigh the cost of the project. Major risks and mitigating measures are summarized in Table 4 and detailed in the risk assessment and risk management plan.[23]

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Weak financial management arrangements for road maintenance	NHA has requested the government to equitize the debt and clean its balance sheet. NHA will (i) expand the toll base, rationalize tolls, and allocate revenue to the road maintenance fund; and (ii) expand PPP-based road construction to reduce the government subsidy.
Lack of counterpart funds	The government will prioritize transport infrastructure in the country's resource allocation. NHA will expand PPP-based road construction to reduce the government subsidy.
Delay in procurement procedures	NHA is familiar with ADB's procurement guidelines and requirements. ADB will provide continuous support to NHA during the procurement process. NHA assures no political intervention in bidding for large-scale public works.
Frequent reassignment of trained staff may reduce built capacity	NHA staff nominated for training will be retained for a minimum period of 3 years in the same position.

ADB = Asian Development Bank, NHA = National Highway Authority, PPP = public–private partnership.
Source: Asian Development Bank staff.

IV. ASSURANCES

36. The government and the NHA 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.

37. The government and the NHA have agreed with ADB on certain covenants for the project, which are set forth in the loan and project agreements.

V. RECOMMENDATION

38. 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 $196,900,000 to the Islamic Republic of Pakistan for the Post-Flood National Highways Rehabilitation 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

7 March 2016

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

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Economic and social recovery in the affected areas of the 2010 floods[a]			
Results Chain	**Performance Indicators with Targets and Baselines**	**Data Sources and Reporting**	**Risks**
Outcome Efficient and safe movement of traffic on the national highways and efficient management of traffic restoration during emergencies	a. By the end of 2021, designated traffic speeds are maintained along the proposed sections of the national highways. (2015 baseline: N-15: 20–30 km per hour; N-50: 20–30 km per hour; N-55: 30–40 km per hour; and N-95: 20–30 km per hour) b. By the end of 2020, NHA's disaster management capacity is strengthened for post-disaster traffic restoration (including traffic management and emergency procurement)	a–b. Project progress reports prepared by NHA, PMC, and ADB consultants	The project area suffers from subsequent flooding.
Outputs 1. National highway network system (including bridges) repaired and rehabilitated 2. DMUs established and staff trained	1. 212 km of damaged national highways and 33 bridges repaired, rehabilitated, and reconstructed by the end of 2020 2a. DMUs in NHA's headquarters and 10 regional offices operationalized by December 2018 (2015 baseline = 0) 2b. 12 NHA operations staff trained in post-disaster emergency traffic restoration management by the end of June 2018 (2016 baseline = 0) 2c. 3 NHA operations staff trained in managing procurement under emergency conditions by the end of June 2018 (2016 baseline = 0)	1–2. Progress reports prepared by NHA, PMC, and ADB consultants	Frequent lateral movement (reassignment) of the trained staff may reduce built capacity.
Key Activities with Milestones **1. National highway network system (including bridges) repaired and rehabilitated** 1.1 Sample bidding documents and request for proposal for recruiting PMC prepared by the executing agency by 31 March 2016. 1.2 All national and international competitive bidding civil works contracts awarded by 31 October 2016. 1.3 PMC mobilized before 31 October 2016. 1.4 Monitoring and grievance redress system developed by 31 December 2016. 1.5 Civil works completed by the end of 2020.			

2. Disaster management units established and staff trained 2.1 Consultant recruited by the end of December 2016. 2.2 Needs assessment, operational plans, preparations, nomination of trainees, and development of training program completed by the end of June 2017. 2.3 Training sessions completed by the end of June 2018. 2.4 Equipment and software procured by the end of December 2017.
Project Management Activities Initial requirement and activity plan for (implementation support) individual consultants developed during loan fact-finding mission. Individual consultants' terms of reference and work plans finalized by ADB and the executing agency by the end of March 2016. Individual consultants mobilized by 31 April 2016. First safeguard (land, social, gender) monitoring report produced by October 2016. Supervision consultants mobilized by 31 July 2016. Review missions fielded every quarter. Midterm review mission fielded in Q3–Q4 2018.
Inputs ADB: $196,900,000 (OCR loan) Government: $21,900,000
Assumptions for Partner Financing Not Applicable.

ADB = Asian Development Bank, DMU = disaster management unit, km = kilometer, NHA = National Highway Authority, OCR = ordinary capital resources, PMC = project management consultant, Q = quarter.

[a] ADB and the World Bank. 2010. *Pakistan Floods 2010 Preliminary Damage and Needs Assessment.* Islamabad.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

http://adb.org/Documents/RRPs/?id=49191-001-3

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. Land Acquisition and Resettlement Framework
12. Risk Assessment and Risk Management Plan