



Report and Recommendation of the President to the Board of Directors

Project Number: 48289-002
June 2017

Proposed Loan and Administration of Loan Islamic Republic of Pakistan: Peshawar Sustainable Bus Rapid Transit Corridor Project

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 12 May 2017)

Currency unit	–	Pakistan rupee/s (PRe/PRs)
PRr1.00	=	\$0.009555
\$1.00	=	PRs104.655

ABBREVIATIONS

ADB	–	Asian Development Bank
AFD	–	Agence Française de Développement
BRT	–	bus rapid transit
EIB	–	European Investment Bank
km	–	kilometer
KPUMA	–	Khyber Pakhtunkhwa Urban Mobility Authority
OCR	–	ordinary capital resources
PAM	–	project administration manual
PDA	–	project design advance

NOTE

In this report, “\$” refers to United States dollars.

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 48289-002	
Project Name	Peshawar Sustainable Bus Rapid Transit Corridor Project	Department /Division	CWRD/CWUW
Country	Pakistan	Executing Agency	Khyber Pakhtunkhwa Urban Mobility Authority
Borrower	Islamic Republic of Pakistan		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Transport policies and institutional development		25.00
	Urban public transport		225.00
	Urban roads and traffic management		75.00
Water and other urban infrastructure and services	Urban flood protection		10.00
	Total		335.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	10.00
Environmentally sustainable growth (ESG)	Eco-efficiency	Mitigation (\$ million)	325.00
	Global and regional transboundary environmental concerns	CO ₂ reduction (tons per annum)	31,000
	Urban environmental improvement	Climate Change impact on the Project	Medium
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	Effective gender mainstreaming (EGM)	✓
Knowledge solutions (KNS)	Organizational development		
	Application and use of new knowledge solutions in key operational areas		
Partnerships (PAR)	Pilot-testing innovation and learning		
	Civil society organizations		
	International finance institutions (IFI)		
	Official cofinancing		
Private sector development (PSD)	Private Sector		
	Promotion of private sector investment		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Urban	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG5, SDG8, SDG11, SDG13		
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: A Involuntary Resettlement: A Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		335.00	
Sovereign Project (Regular Loan): Ordinary capital resources		335.00	
Cofinancing		150.00	
Agence Francaise de Developpement - Loan		75.00	
European Investment Bank - Loan		75.00	
Counterpart		102.00	
Government		102.00	
Total		587.00	

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 Peshawar Sustainable Bus Rapid Transit (BRT) Corridor Project. The report also describes the proposed partial administration of a loan to be provided by the Agence Française de Développement (AFD) for the Peshawar Sustainable BRT Corridor Project, and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, approve the administration of the loan.

2. The proposed project will help develop a sustainable urban transport system in Peshawar by delivering the city's first integrated BRT corridor, directly benefiting 0.5 million people.¹ The project will comprise two interlinked outputs: (i) the construction of a 26-kilometer (km) BRT corridor and associated facilities, and (ii) effective project management and sustainable BRT operations through institutional developments. The project is economically justified by major time savings for future BRT passengers, vehicle operating cost savings, better air quality, and carbon emissions savings, which will improve the health of Peshawar's citizens and mitigate climate change. The project will also make Peshawar more livable and safe, boost private sector investment, and foster gender equity.

II. THE PROJECT

A. Rationale

3. **Background and issues.** Peshawar is the capital city of the northwest province of Khyber Pakhtunkhwa in Pakistan. A 2-hour drive from the national capital of Islamabad, Peshawar sits in the Indus valley near the Afghan border. Although the last census was conducted in 1998, the city's population was estimated at 1.8 million in 2016, and is projected to reach 3.0 million by 2030 based on current growth rates. Internal displacement and Afghan refugee migration has driven rapid population growth, and there is significant pressure to maintain infrastructure development and service provision in accordance with the growing demand for housing, transport and basic urban services. Car and motorcycle ownership remains low but is increasing due to a growing middle class. Combined with other factors such as inefficient public transport and weak traffic management to organize competing modes, motorization is exacerbating congestion and increasing air and noise pollution.² Traffic conditions on key arterial roads have declined to unmanageable levels, with average peak hour travel speeds as low as 11 km per hour.³ No notable investment in public transport has occurred in decades. In contrast, recent large investments in various flyovers reflect the prioritization of private road transport. Due to its limited infrastructure, the city's urban transport system fails to provide mobility for all.

4. Poverty is widespread in Peshawar, with an incidence of 40%. The unemployment rate is about 10% for men but 90% for women, who have fewer opportunities to achieve economic independence. The poorest people and women travel mostly on foot or via informal public transport mainly comprising pickup trucks and large and medium-sized buses from the 1980s and 1990s. Altogether, these vehicles serve around 70% of the total demand for motorized transport, but represent only 43% of total traffic. In response to the high market demand, many operators

¹ An estimated 519,000 people (29% of Peshawar's total population) live within 1 km from a BRT station and would potentially benefit from this system.

² The environmental impact assessment measured average concentrations of particulate matter of less than 10 micrometers at 138–184 micrograms per cubic meter in five locations along the BRT corridor. The level recommended by the World Health Organization is 20 micrograms per cubic meter.

³ Government of Khyber Pakhtunkhwa and ADB. 2016. *Peshawar BRT Project: Preliminary Design Report*. desMobi: Jakarta.

without permits are plying the city's key corridors in a disorganized and inefficient manner. There is no effective public oversight of supply and demand or of the quality of public transport vehicles, bus stops are rudimentary and lack schedule and itinerary information, the ticketing system is obsolete, and operators compete for passengers, worsening congestion and impairing safety. The incidence of traffic collisions is increasing, mainly affecting pedestrians, and 84% of surveyed passengers complain about crowded and unsafe conditions during the rush period and the improper behavior of drivers and conductors. Public security also determines how residents move around and interact in the city, as all residents are affected by the threat of terrorism which remains a concern in Peshawar as well as in other major cities in the country. A well-designed, safe and accessible public transport system in Peshawar would therefore substantially benefit the urban poor and women.

5. **Project preparation.** In May 2014, the Cities Development Initiative for Asia completed a prefeasibility study to improve Peshawar's urban transport system.⁴ The Asian Development Bank (ADB) subsequently provided technical assistance to prepare Peshawar's BRT corridor.⁵ ADB also approved a \$10 million project design advance (PDA) loan from ADB's ordinary capital resources (OCR) in November 2016 to (i) prepare detailed engineering design, and the BRT business model and operational plan; (ii) facilitate project communication; (iii) build capacity; and (iv) undertake advance procurement for civil works and equipment.⁶

6. **Alignment with country strategy.** The project is consistent with the Government of Pakistan's Vision 2030, Framework for Economic Growth, and National Climate Change Policy. It supports the priorities set out in the Khyber Pakhtunkhwa Integrated Development Strategy 2014–2018, and is aligned with ADB's country partnership strategy and Sustainable Transport Initiative.⁷ The project design includes lessons from past assistance, notably the need for strong political consensus, and a robust governance structure. Coordination with development partners has been ensured, particularly with expected cofinanciers such as the AFD and European Investment Bank (EIB). Private sector participation is being considered for the BRT operations (para. 20), but not for construction as globally few mass transit systems recover their capital costs through revenues alone, especially as fares must be affordable and socially acceptable.

7. ADB's assistance to the project adds value via the following:

- (i) **Organizational and institutional developments.** ADB supported the legislation for (a) the Khyber Pakhtunkhwa Mass Transit Ordinance, which established the Khyber Pakhtunkhwa Urban Mobility Authority (KPUMA) and was approved in September 2016; and (b) a special purpose vehicle called TransPeshawar, which was licensed in December 2016.⁸ The KPUMA is responsible for developing policies and regulations, and planning, coordinating, and funding urban transport at the provincial level. TransPeshawar will own the BRT infrastructure and assets, and is responsible for the BRT operations and management of service contracts.
- (ii) **Project design and innovation.** ADB's intervention resulted in innovative design features such as (a) the promotion of nonmotorized transport through universal

⁴ Cities Development Initiative for Asia. 2014. *Peshawar Urban Transport Pre-Feasibility Study*. Manila.

⁵ ADB. 2014. *Technical Assistance to Pakistan for Preparing the Peshawar Sustainable BRT Corridor Project*. Manila.

⁶ ADB. 2016. *Project Design Advance to Pakistan for the Peshawar Sustainable BRT Corridor Project*. Manila.

⁷ Government of Pakistan, Planning Commission. 2007. *Pakistan in the 21st Century, Vision 2030*. Islamabad; Government of Pakistan, Planning Commission. 2011. *Framework for Economic Growth*. Islamabad; Government of Pakistan. 2012. *National Climate Change Policy*. Islamabad; Government of Khyber Pakhtunkhwa. 2014. *Integrated Development Strategy 2014–2018*. Peshawar; ADB. 2015. *Country Partnership Strategy: Pakistan, 2015–2019*. Manila; ADB. 2010. *Sustainable Transport Initiative Operational Plan*. Manila.

⁸ TransPeshawar is incorporated and licensed under the Securities and Exchange Commission of Pakistan as a Section 42 (nonprofit) public company. The only company shareholder is the Government of Khyber Pakhtunkhwa.

accessibility, the inclusion of bicycle lanes along the BRT corridor, and a bicycle sharing system at Peshawar University; (b) a modern fare collection system using smart cards to enable distance-based fares; and (c) the use of satellite imagery to map the corridor and facilitate the engineering design.

- (iii) **Operational planning and financial sustainability.** ADB promoted a third-generation BRT system using a “direct service” operational model allowing BRT vehicles to travel along the BRT corridor in the busiest parts of the city and off-corridor in less congested areas. This approach expands the system’s reach and capacity, lessens passenger transfers, and increases ridership and financial sustainability. The project was designed primarily to limit required operational subsidies, and create additional sources of revenue through parking and commercial activities.
- (iv) **Stakeholder engagement and bus industry transition.** ADB strongly emphasizes engagement with the existing bus industry, and established a negotiation process enabling existing operators to participate in the new BRT system. The project design includes a fleet scraping program and compensation mechanism for nonparticipating operators. A large stakeholder engagement and participation plan is also being implemented to ensure buy-in from the communities impacted by the project.

B. Impact and Outcome

8. The project is aligned with the following impacts: (i) a safe, affordable, comfortable, and environment-friendly transport system in Peshawar achieved; and (ii) quality of life in Peshawar improved. The project will have the following outcome: quality of public transport in Peshawar improved, benefiting 0.5 million of the city’s inhabitants.⁹

C. Outputs

9. **Output 1: Peshawar’s first sustainable bus rapid transit corridor and associated facilities constructed.** The 26 km BRT corridor will be restructured over its entire width (“façade-to-façade”), including (i) 31 BRT stations and dedicated lanes built in the median, mainly at-grade with a 4 km elevated section in the city center, and tunnel or trench sections at junctions; (ii) up to three mixed-traffic lanes improved in each direction in wider sections; (iii) bicycle lanes added and sidewalks and streetlights improved all along the corridor; (iv) on-street parking and green areas added in various locations; and (v) drainage improved to climate-proof the corridor. The BRT infrastructure will be completed with two depots and one staging facility, including park-and-ride facilities and commercial areas, and 100 off-corridor bus stops. An office building will be built at the east depot to house the KPUMA and TransPeshawar offices and the BRT control center. A parking plaza will also be constructed in the precinct of the Lady Reading Hospital in the city center to promote modal shift from private vehicles to the BRT.

10. **Output 2: Effective project management and sustainable bus rapid transit operations established.** This will be achieved through (i) institutional development and capacity building of the KPUMA and TransPeshawar; (ii) the design of the BRT operational plan and business model to achieve low operational subsidies; (iii) the facilitation of a bus industry transition by negotiating with existing bus operators; (iv) effective project communication and stakeholder engagement; and (v) the procurement of the BRT fleet, a fare collection system, and intelligent transport systems.¹⁰

⁹ The design and monitoring framework is in Appendix 1.

¹⁰ The PDA loan supports several activities under this output (footnote 6).

D. Summary Cost Estimates and Financing Plan

11. The project is estimated to cost \$587 million (Table 1). The government has requested a regular loan of \$335 million from ADB's OCR 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-based lending facility; a commitment charge of 0.15% per year (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 project agreements. Based on the straight-line method, the average loan maturity is 15.97 years, and the maturity premium payable to ADB is 0.10% per year.

Table 1: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Output 1: Construction of the Peshawar BRT corridor	336.7
2. Output 2: Effective project management and sustainable BRT operations	179.3
Subtotal (A)	516.0
B. Contingencies^c	56.5
C. Financial Charges During Implementation^d	14.5
Total (A+B+C)	587.0

BRT = bus rapid transit.

^a Includes taxes and duties of \$76.7 million to be financed by the Government of Khyber Pakhtunkhwa, partly through exemptions and partly through cash contributions. Taxes and duties do not form an excessive share of the project cost.

^b In 2017 current prices. Inclusive of a \$10 million project design advance.

^c Physical contingencies are computed at 10% for civil works and equipment, and price contingencies are computed at, on average, 3.7% on foreign exchange costs and 11.9% on local currency costs. These include a 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 ordinary capital resources loan has been computed at the 3-year United States dollar fixed swap rate, plus an effective contractual spread of 0.5% and maturity premium of 0.1%.

Source: Asian Development Bank.

12. **Cofinancing.** The government has also requested two loans, of \$75 million equivalent each, from the AFD and EIB to finance civil works and equipment costs jointly. The AFD and EIB have confirmed their interest in providing this cofinancing for the project. ADB, the AFD, and the EIB will jointly finance relevant contract packages and expenditure categories on a cost-sharing basis. ADB procurement guidelines will apply along with universal procurement for all jointly financed packages.¹¹ ADB will partially administer the AFD funds, while the EIB funds will not be administered.¹² ADB and the AFD will conclude a cofinancing agreement, while ADB and the EIB will conclude an aide-mémoire detailing the cofinancing arrangements.

13. The summary financing plan is in Table 2. ADB will finance expenditures relating to (i) civil works, (ii) equipment, (iii) environmental and social impact mitigation measures, (iv) consulting services, (v) TransPeshawar's full operating costs for 3 years, and (vi) financing charges during implementation. The government will finance expenditures relating to taxes and duties, land acquisition and resettlement, and project incremental administration costs. Detailed cost estimates by expenditure category and financier are in the project administration manual (PAM).

¹¹ The blanket waiver of the member country procurement eligibility restrictions for cofinanced OCR operations approved by the Board in 2015 pursuant to the Enhancing Operational Efficiencies paper applies in this case. ADB. 2015. *Enhancing Operational Efficiency of the Asian Development Bank*. Manila.

¹² ADB administration will comprise oversight with respect to procurement, safeguards, and disbursement.

Table 2: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan) ^a	335.0	57.0
Agence Française de Développement ^b	75.0	12.8
European Investment Bank	75.0	12.8
Government of Khyber Pakhtunkhwa	102.0	17.4
Total	587.0	100.0

^a Inclusive of a \$10 million project design advance.

^b Administered by the Asian Development Bank.

Source: Asian Development Bank.

14. **Climate finance.** It is estimated that climate mitigation will cost \$325 million and climate adaptation \$10 million. ADB will finance 100% of mitigation costs and 100% of adaptation costs. Details are in the PAM.

E. Implementation Arrangements

15. The borrower is Pakistan, which will enter into a subsidiary loan agreement with the Government of Khyber Pakhtunkhwa. The KPUMA's recently established board of directors, chaired by the chief minister, will oversee the project. The executing agency is the KPUMA, and the implementing agencies are the Peshawar Development Authority for output 1 and TransPeshawar for output 2. The implementation arrangements are summarized in Table 3 and detailed in the PAM.¹³

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	September 2017–June 2021		
Estimated completion date	30 June 2021		
Estimated loan closing date	31 December 2021		
Management			
(i) Oversight body	KPUMA board of directors, comprising: The chief minister, Government of Khyber Pakhtunkhwa (chair) The minister and secretary of the Transport and Mass Transit Department; the additional chief secretary of the Planning and Development Department; the secretary of the Local Government, Elections, and Rural Development Department; the secretary of the Finance Department; the executive officer of the Cantonment Board; the deputy inspector general of the Traffic Police; three members to be nominated by the speaker of the provincial assembly; one expert to be nominated by the secretary of the Transport and Mass Transit Department; and the managing director of the KPUMA (members).		
(ii) Executing agency	KPUMA		
(iii) Implementing agencies	PDA, TransPeshawar		
(iv) Implementation units	KPUMA project management unit, 15 staff (estimated) PDA project implementation unit, 30 staff (estimated) TransPeshawar project implementation unit, 56 staff proposed		
Procurement	International competitive bidding	6 contracts	\$355.0 million
	National competitive bidding	1 contract	\$5.0 million
	Shopping	multiple contracts	\$0.6 million
Consulting services	QCBS ^a	786 person-months	\$15.0 million ^b

¹³ Project Administration Manual (accessible from the list of linked documents in Appendix 2).

Aspects	Arrangements
Retroactive financing and advance contracting	Civil works, equipment, and operating costs are proposed for advance contracting and retroactive financing, equivalent to 20% of the loan amount for October 2016–September 2017 (12 months).
Disbursement ^c	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 between the Government of Pakistan and ADB.

ADB = Asian Development Bank, KPUMA = Khyber Pakhtunkhwa Urban Mobility Authority, PDA = Peshawar Development Authority, QCBS = quality- and cost-based selection.

^a Except for construction supervision services, for which single-source selection is requested by the Government of Khyber Pakhtunkhwa to enable the recruitment of the same consulting firm (Mott MacDonald Pakistan, in association with Mott MacDonald International), which is currently conducting the detailed engineering design under the project design advance. This is consistent with best practices in the construction industry for a single firm to undertake both roles, and with provisions in the request for proposal and terms of reference of the consulting firm.

^b Inclusive of consulting services under the \$10 million project design advance.

^c ADB will partially administer disbursements for the financing of the Agence Française de Développement.

Source: ADB.

III. DUE DILIGENCE

A. Technical

16. The project preparatory technical assistance and ongoing detailed engineering design financed under ADB's PDA loan has confirmed the project's technical viability.¹⁴ The 26 km BRT corridor alignment was carefully selected to capture major demand hubs while verifying the possibility of retrofitting the BRT infrastructure (stations and dedicated lanes) in congested areas and narrower corridor sections. Some limited sections of the alignment were designed elevated or in tunnels or trenches to allow full segregation and maximum commercial speed. Most of the alignment remains at-grade, allowing 54 km off-corridor service routes to enter the dedicated infrastructure. The BRT system was planned using a detailed methodology, including the inventory and analysis of existing services to determine current service capacity and existing demand, and surveys of the proposed BRT corridor. Based on these results, an optimized routing and network plan was developed to ensure maximum ridership and the financial sustainability of the system, including the lowest possible operational subsidies.

17. The institutional structure has been improved by the establishment of the KPUMA and TransPeshawar, which will manage and control the overall quality of the BRT system's operations. The system's quality will be enhanced by maximizing the use of private sector contracts for system operations. TransPeshawar will specifically oversee private sector contracts to companies for (i) bus operations; (ii) station services; (iii) the fare system and control center; (iv) the financial clearinghouse; and (v) quality control, monitoring, and evaluation.

18. A climate risk vulnerability assessment led to a reassessment of the drainage capacity requirement to climate-proof the BRT corridor from floods.¹⁵

B. Economic and Financial

19. The project aims to provide a high frequency transit service, replacing informal modes of transport travelling in mixed traffic, with fuel-efficient BRT vehicles travelling in segregated lanes at high speeds. In the first year of BRT operations the demand is expected to be 480,000

¹⁴ Footnote 3. The feasibility study report, including the preliminary design of and due diligence for the BRT corridor, was submitted in January 2016.

¹⁵ Climate Risk Vulnerability Assessment (accessible from the list of linked documents in Appendix 2).

passengers per day. By 2020, savings from vehicle operating costs are expected to reach \$10 million per year, while time savings benefits for both BRT passengers and the remaining mixed traffic will reach \$94 million per year. Additional safety benefits (from reduced fatalities and injuries) and greenhouse gas emission savings will reach \$4 million per year. The economic analysis yielded an economic internal rate of return of 15%, demonstrating the project's economic viability.¹⁶ To ensure a robust result, three sensitivity tests were conducted for the following scenarios: (i) a 20% capital cost overrun, (ii) a 20% reduction in passenger ridership, and (iii) a 2-year delay in system operationalization. All scenarios meet the 9% minimum economic yield required for an ADB-financed project.

20. The BRT operational plan was designed to ensure that revenue generated from the system will adequately cover system operations and maintenance costs, eliminating the need for operational subsidies. The BRT system generates revenue from (i) fares (94% of all estimated revenues, with the average fare set at PRs25); (ii) advertising (3%); (iii) rent on concessions storefronts in stations and depots (2%); and (iv) revenue from a parking plaza (1%). In the absence of a cost recovery tariff, a conventional financial evaluation based on cash flow analysis leading to the computation of a financial internal rate of return is not considered appropriate.¹⁷ Instead, an operating ratio analysis was conducted to ensure that revenues will cover operating costs. The future financial position of TransPeshawar confirms solid net cash flows as well as its financial capacity to cover recurrent costs to sustain the facilities developed under the project.

C. Governance

21. The project financial management and procurement capacity assessments conducted in March 2017 found substantial pre-mitigation risks.¹⁸ The executing and implementing agencies agreed upon an action plan to strengthen their financial management system and procurement capacity. This plan notably includes the engagement of consultants to provide training and support to the project management unit and two project implementation units during project implementation. The assessed risk is based on the internal control environment, the implementing agencies' experience implementing development projects, supervisory procedures, and technical and financial capability.

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

D. Poverty, Social, and Gender

23. The project will benefit Peshawar's estimated population of 1.8 million, 40% of whom are poor, through increased access to safe, reliable, and affordable public transport. An estimated 0.5 million passengers are predicted to use the BRT regularly, with the percent of female passengers increasing from 15% in the current informal public transport system to 20% in the first year of BRT operations, with a subsequent annual increase of 5% in the first 3 years. The low percent of female passengers in public transport is mainly due to the risk of harassment that

¹⁶ Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2).

¹⁷ The Government of Khyber Pakhtunkhwa will repay the loan from its own resources, and will consider the capital investment (including the BRT infrastructure and initial fleet) as an upfront subsidy. Accordingly, TransPeshawar will not need to repay the loan from the BRT system's operational revenue. The various terms and conditions of the ADB, EIB, and AFD loans will therefore not impact this financial analysis.

¹⁸ A detailed Financial Management Assessment and Action Plan, and Procurement Capacity Assessment and Action Plan are available in the PAM (accessible from the list of linked documents in Appendix 2).

women face in overcrowded public buses. Consequently, most women prefer to walk 2 km per day on average, or are forced to use more expensive private transportation, impacting their disposable income. The project will establish universal access and safety features for women, children, and the disabled in all 31 BRT stations and their accesses, including proper lighting and monitoring through closed-circuit television cameras; and in buses, including segregated areas for women, and staff trained to deal with harassment incidents. Categorized as effective gender mainstreaming, the project will encourage women's meaningful participation by ensuring that 10% of BRT operations employees, and TransPeshawar and KPUMA staff are women.¹⁹

24. Overall, the project is expected to generate 4,020 jobs directly through future BRT operations, including 1,441 jobs for BRT station services (such as ticketing, security, and cleaning), 2,522 jobs in bus operations (such as driving, conducting, and mechanics), and 57 TransPeshawar staff.

E. Safeguards

25. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.²⁰

26. **Environment (category A).**²¹ The Peshawar Development Authority has prepared the environmental impact assessment in accordance with ADB's Safeguard Policy Statement. The project's major anticipated negative environmental impacts are related to traffic disruptions, utility relocation, and noise impacts during construction. The project is also anticipated to have positive impacts during operation, specifically on the urban acoustic environment currently afflicted with decibel levels reaching the mid-80s during the day and mid-70s at night. Likewise, the project is expected to impact urban air quality positively. The project design incorporates adequate mitigation measures, which will be implemented through an environmental management plan. This plan includes a capacity building and training program for Peshawar Development Authority project staff and contractors during pre-construction, construction, and operation. The project also complies with public disclosure and consultation requirements. Public consultations involving more than 600 different stakeholders, including women and two major Peshawar-based nongovernment organizations, were conducted from August 2016 to January 2017, and other public hearings have been organized in April and May 2017. The draft environmental impact assessment was disclosed on the ADB website on 27 February, an updated version was disclosed on 7 April, and the final assessment will be disclosed on 10 July 2017.

27. **Involuntary resettlement (category A).**²² The project will have resettlement impacts on 535 households due to (i) the acquisition of 5.9 hectares of private arable land and (ii) the demolition of permanent structures in two underpass markets and a privately-owned building encroaching upon the corridor's right-of-way. It will also impact the livelihoods of 8 agricultural land tenants, 86 formal businesses and shopkeepers, 235 informal vendors operating roadside microenterprises within the right-of-way, and workers from the affected shops. All formal and micro businesses will need to relocate to alternative sites. The leaseholders of 79 shops and owners of 15 shops will lose income from the monthly rent of their commercial structures. Among the 535 affected households, 349 are vulnerable and 246 are severely affected; these will need

¹⁹ Summary Poverty Reduction and Social Strategy and Gender Action Plan (accessible from the list of linked documents in Appendix 2).

²⁰ ADB. Safeguard Categories. <https://www.adb.org/site/safeguards/safeguard-categories>. The AFD and EIB have agreed to apply ADB's Safeguard Policy Statement to all cofinanced components of the project.

²¹ Environmental Impact Assessment (accessible from the list of linked documents in Appendix 2).

²² Resettlement Plan (accessible from the list of linked documents in Appendix 2).

additional resettlement and rehabilitation assistance. As much as possible, the alignment and design and location of the stations were adjusted to reduce the resettlement impacts. A draft resettlement plan has been prepared in close consultation with the affected persons and relevant agencies. The plan provides an alternative location for the affected shops, compensation for lost assets, and transitional support. A draft livelihood restoration plan was also prepared to help the affected households cope with their displacement. The land acquisition and resettlement plan has been endorsed by the Government of Khyber Pakhtunkhwa, and was disclosed on ADB's website on 11 April 2017. It will be updated based on the final detailed engineering design and will include impacts from off-corridor bus stops, worker camps, and materials storage. The KPUMA will be responsible for updating and implementing the land acquisition and resettlement plan. To augment the KPUMA's limited capacity and experience in such plan implementation and monitoring, a resettlement team under ADB's project design advance will support the authority.

28. **Indigenous peoples (category C).** The project is located in the city of Peshawar, where no indigenous peoples, as defined under ADB's Safeguard Policy Statement, reside. The project will not affect any indigenous communities and, accordingly, no indigenous peoples planning documents are required.

F. Summary of Risk Assessment and Risk Management Plan

29. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.²³

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
Public transport users do not utilize BRT at projected levels.	The project preparatory TA consultants estimated demand and ridership by following a proven but simplified methodology. These estimates will be further updated and confirmed through detailed additional surveys by ODBM consultants under the PDA. Actual ridership at system opening will depend on the final project design, construction quality, and quality of operations management by TransPeshawar.
Political pressure to fast-track project implementation before the mid-2018 general elections undermines the quality of the project design and implementation.	All possible advance actions have been taken to help the Government of Khyber Pakhtunkhwa deliver the main bulk of civil works before the mid-2018 elections. Large consulting teams have been mobilized ahead of loan approval under the PDA. The detail engineering design is ongoing and 50% completed. The first civil works packages have been advertised in May 2017. Works are expected to start as soon as the project loan is declared effective in September 2017 (this date is tentative). Retroactive financing will be used as well to shift utilities ahead of loan approval.
Vested interests (existing public transport operators, shopkeepers, and others along the BRT corridor) try to undermine the project during implementation.	Existing operators. The project design includes dedicated cost and consultancy support to facilitate bus industry transition through negotiation and capacity building to operate the BRT. Consultations with the existing bus operators' federation were held during the project preparatory TA to inform operators about the project. Skilled negotiators, who were recruited in the ODBM consulting team under the PDA, will further discuss and develop a business model to include existing operators in the BRT operations as much as possible. The initial BRT fleet will be financed under the project and leased to private operators to reduce the need to mobilize capital and allow existing operators to participate in the bidding process. The project financing includes a fleet scraping program and compensation mechanism for non-participating existing operators.

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

Risks	Mitigating Measures
	Shopkeepers' and traders' associations. The government, supported by the PMCCB communication team and ADB project team, engaged with traders' associations and other organizations (e.g., Lady Reading Hospital and the Cantonment Board) in the vicinity that are impacted by the BRT corridor to present the project design, consider their concerns, and ensure buy-in and ownership, so that these groups do not oppose the project or ask to change the project alignment.
Delayed operationalization of the KPUMA and TransPeshawar fails to provide necessary critical mass to implement the project, and capacity building.	Parliament has already approved the legal framework establishing the KPUMA, and TransPeshawar is already licensed as a Section 42 (nonprofit) public company. The government, as part of its commitment, has already approved an annual allocation for the KPUMA's operations. ADB will finance TransPeshawar's operational expenditures for 3 years. Organograms and job descriptions for key staff of both organizations have been developed by the PMCCB consultants, who will also provide general support during staff recruitment.
The security situation deteriorates and impairs project implementation and future BRT operations.	The Government of Khyber Pakhtunkhwa has committed to provide security to the project site through its Home Affairs Department and local law enforcement agencies. Bidders are also instructed to include provisions for security at the camp site and for transportation. The project design includes measures such as metal detectors installed in all BRT stations, and presence of security agents in all BRT vehicles.

ADB = Asian Development Bank; BRT = bus rapid transit; KPUMA = Khyber Pakhtunkhwa Urban Mobility Authority; ODBM = operations design and business model; PDA = project design advance; PMCCB = project management, coordination, and capacity building; TA = technical assistance.

Source: ADB.

IV. ASSURANCES

30. The government, KPUMA, Peshawar Development Authority, and TransPeshawar have assured ADB that the project 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 PAM and loan documents.

31. The government, KPUMA, Peshawar Development Authority, and TransPeshawar have agreed with ADB on certain covenants for the project, which are set forth in the draft loan and project agreements.

V. RECOMMENDATION

32. 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 \$335,000,000 to the Islamic Republic of Pakistan for the Peshawar Sustainable Bus Rapid Transit Corridor Project, from ADB's ordinary capital resources, in regular terms, 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

8 June 2017

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with: A safe, affordable, comfortable, and environment-friendly transport system in Peshawar achieved ^a Quality of life in Peshawar improved ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome Quality of public transport in Peshawar improved, benefiting 0.5 million of the city's inhabitants	By 2021: a. Modern BRT buses operating at a maximum 5-minute headway over a network 80 km in length (2017 baseline: 0) b. BRT daily ridership reaches 480,000 passengers, of whom 20% are women (2017 baseline: 607,000 daily passengers of informal public transport, of whom 15% are women) c. Annual GHG emissions (CO ₂ , methane, nitrous oxide, and halocarbons) reduced by 31,000 metric tons due to public transport vehicles' modernization (2017 baseline: tbd)	a–b. TransPeshawar and bus service providers' progress reports c. KPUMA statistics	Public transport users do not utilize BRT at projected levels. The security situation deteriorates and impairs project implementation and future BRT operations.
Outputs 1. Peshawar's first sustainable BRT corridor and associated facilities constructed	By 2019: 1a. 26 km of BRT infrastructure, including 31 stations and dedicated lanes, completed as designed and scored at a "gold" quality standard (2017 baseline: 0) 1b. Universal accessibility criteria scored maximum points, i.e., 100% of BRT stations achieve universal accessibility for women, children, and PWDs (2017 baseline: 0) 1c. Mixed traffic lane(s), sidewalks, green areas, on-street parking, and street lights rebuilt over the whole length of the corridor (general improvement of the 2017 baseline) 1d. Bicycle lanes built (2017 baseline: 0) 1e. Two depots and one staging facility built, including park-and-ride facilities and commercial areas (2017 baseline: 0) 1f. One office building built for the KPUMA, TransPeshawar, and BRT control center (2017 baseline: 0) 1g. 100 bus stops installed over 54 km of bus routes off the BRT corridor (2017 baseline: 0) 1h. One parking plaza built at Lady Reading Hospital (2017 baseline: 0) 1i. 78 safe (bridge, tunnel or signalized if at-grade) pedestrian crossings installed along the BRT corridor (2017 baseline: 62 crossings, of which 50% are at-grade and unsafe)	1a–1b. BRT Standard ^b 1c–1i. PDA and KPUMA quarterly progress reports	Vested interests (shopkeepers along the BRT corridor, existing public transport operators, and others) try to undermine the project during implementation. Political pressure to fast-track project implementation before the mid-2018 general elections undermines the quality of the project design and implementation.

<p>2. Effective project management and sustainable BRT operations established</p>	<p>By 2020:</p> <p>2a. 447 modern BRT buses (either 9 m or 12 m in length) procured (2017 baseline: 0)</p> <p>2b. A distance-based fare collection system, BRT control center, and other ITSs procured and installed by TransPeshawar to operate BRT services (2017 baseline: 0)</p> <p>2c. TransPeshawar and the KPUMA are fully staffed (with 10% female staff), and the staff are trained as per their respective organizational development plans (2017 baseline: 0)</p> <p>2d. At least 10% of operation and maintenance staff are women (2017 baseline: 0)</p> <p>2e. A subsidy for BRT operation and maintenance costs is not required (2017 baseline: 0% subsidy for public transport)</p> <p>2f. Average bus commercial speeds on the BRT corridor increased to 25.0 km/hour (2017 baseline: 12.2 km/hour)</p> <p>2g. Multimedia behavior campaigns regarding the safety of all passengers including women, children, the elderly, and PWDs, reached at least 480,000 riders (2017 baseline: 0)</p>	<p>2a–2b. TransPeshawar semiannual progress reports</p> <p>2c–2g. KPUMA and TransPeshawar staffing plans and semiannual reports</p>	<p>Delayed operationalization of the KPUMA and TransPeshawar fails to provide necessary critical mass to implement the project, and capacity building</p>
<p>Key Activities with Milestones</p> <p>1. Peshawar’s first sustainable BRT corridor and associated facilities are constructed</p> <p>1.1 Conduct climate risk vulnerability assessment (Q2 2017)</p> <p>1.2 Prepare detailed design under the project design advance and tender bid documents (Q1–Q2 2017)</p> <p>1.3 Complete land acquisition and obtain environmental clearances (Q3 2017)</p> <p>1.4 Award civil works contracts (Q4 2017)</p> <p>1.5 Complete full restructuring of the Peshawar BRT corridor (Q1 2019)</p> <p>2. Sustainable and effective BRT operations are established</p> <p>2.1 Recruit staff and prepare the business models of the KPUMA and TransPeshawar (Q2–Q3 2017)</p> <p>2.2 Conduct a capacity building program for staff at the KPUMA and TransPeshawar (Q3 2017–2018)</p> <p>2.3 Complete the BRT operational plan and the BRT communication plan (Q3 2017)</p> <p>2.4 Procure (2017) and install ITSs as part of the BRT infrastructure (Q4 2018)</p> <p>2.5 Procure (2017) the BRT fleet (447 buses) to be operated in the BRT network (Q4 2018)</p> <p>2.6 Monitor the 2-year maintenance contract with the bus supplier (Q1 2019–Q1 2021)</p> <p>2.7 Negotiate with existing private bus operators (Q2 2017–2018)</p> <p>2.8 Set up a compensation mechanism and fleet scraping program for excluded operators (Q1 2018)</p> <p>2.9 Prepare and ensure the signing of service contracts with private company(ies) to run BRT operations (Q4 2018)</p> <p>2.10 Train bus drivers and test BRT operations (Q1 2019)</p> <p>2.11 Begin BRT operations (Q1 2019)</p> <p>2.12 Conduct awareness campaigns on traffic rules and BRT safety (2017–2019)</p> <p>2.13 Conduct socioeconomic and perception surveys (Q1 2020)</p> <p>2.14 Draft an urban development strategy and revise land use plans along the corridor (Q4 2018)</p>			

Project Management Activities

Conduct all primary and baseline data surveys (Q2 2017)

Set up a project monitoring and evaluation system, and project performance management system with a gender indicator (Q2 2017)

Inputs

ADB: \$335 million (loan)

AFD: \$75 million (loan), partially administered by ADB

Government of Khyber Pakhtunkhwa: \$102 million

Assumptions for Partner Financing

EIB: \$75 million (loan), not administered by ADB

ADB = Asian Development Bank, AFD = Agence Française de Développement, BRT = bus rapid transit, CO₂ = carbon dioxide, EIB = European Investment Bank, GHG = greenhouse gas, ITS = intelligent transport system, km = kilometer, KPUMA = Khyber Pakhtunkhwa Urban Mobility Authority, m = meter, PDA = Peshawar Development Authority, PWD = person with disabilities, Q = quarter, tbd = to be determined.

^a Government of Khyber Pakhtunkhwa. 2014. *Integrated Development Strategy 2014–2018*. Peshawar.

^b Institute for Transportation and Development Policy. 2016. *The BRT Standard*. New York.

The BRT Standard is an evaluation tool for BRT corridors based on international best practices. It is also the centerpiece of a global effort by leaders in BRT design to establish a common definition of BRT and to ensure that BRT corridors more uniformly deliver world-class passenger experiences, significant economic benefits, and positive environmental impacts. The standard functions as a planning tool, scoring system, and means of achieving a common definition of BRT.

Source: ADB.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=48289-002-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Urban Transport
4. Project Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Climate Risk Vulnerability Assessment
8. Economic and Financial Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Gender Action Plan
12. Environmental Impact Assessment
13. Resettlement Plan
14. Risk Assessment and Risk Management Plan

Supplementary Documents

15. Financial Management Assessment Report
16. Procurement Risk Assessment Report