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R2019-0158/1

June 10, 2019

Closing Date: Thursday, June 27, 2019 at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Pakistan - Karachi Mobility Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed loan to Pakistan for the Karachi Mobility Project (R2019-0158), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
President
Bank Group Senior Management
Vice Presidents, Bank, IFC and MIGA
Directors and Department Heads, Bank, IFC, and MIGA

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Report No: PAD3296

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF
US$382.0 MILLION

TO THE

ISLAMIC REPUBLIC OF PAKISTAN

FOR A

KARACHI MOBILITY PROJECT

June 6, 2019

Transport Global Practice
South Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2019)

Currency Unit =	Pakistan Rupee (PKR)
PKR 141.65 =	US$1

FISCAL YEAR
July 1 - June 30

Regional Vice President:	Hartwig Schafer
Country Director:	Patchamuthu Illangovan
Senior Global Practice Director:	Guangzhe Chen
Practice Manager:	Olivier P. Le Ber
Task Team Leader(s):	Said Dahdah, Hasan Afzal Zaidi

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	KSDP	Karachi Strategic Development Plan
AED	Anti-Encroachment Drive	KMP	Karachi Mobility Project
AGP	Auditor General Pakistan	KUTMP	Karachi Urban Transport Master Plan
AIIB	Asian Infrastructure Investment Bank	LA	Legal Agreement
AWPB	Annual Work Plan and Budget	LRT	Light Rail Transit
BRT	Bus Rapid Transit	M&E	Monitoring and Evaluation
CAPEX	Capital Expenditure	MRT	Metro Rail Transit
CLRP	Compensation and Livelihood Rehabilitation Plan	NGO	Non-Government Organization
CoA	Chart of Accounts	NPV	Net Present Value
CPS	Country Partnership Strategy	OD	Origin Destination
DA	Designated Account	OHS	Occupational Health and Safety
DHA	Defense Housing Authority	O&M	Operations and Maintenance
DMC	District Municipal Corporation	PA	Project Agreement
DRTA	District Regional Transport Authority	PAP	Project Affected Persons
EIA	Environmental Impact Assessment	PDO	Project Development Objective
EIRR	Economic Internal Rate of Return	PKR	Pakistani Rupee
EMP	Environmental Management Plan	PMT	Project Management Team
FM	Financial Management	PPP	Public Private Partnership
FLFP	Female Labor Force Participation	ROW	Right of Way
GBV	Gender Based Violence	SEA	Sexual Exploitation and Abuse
GDP	Gross Domestic Product	SIA	Social Impact Assessment
GoP	Government of Pakistan	SIDCL	Sindh Infrastructure Development Company Limited
GoS	Government of Sindh	SMP	Social Management Plan
GRM	Grievance Redress Mechanism	SMTA	Sindh Mass Transit Authority
GRS	Grievance Redress Services	SMTC	Sindh Mass Transit Cell
IBRD	International Bank for Reconstruction & Development	TA	Technical Assistance
IFC	International Finance Corporation	ToC	Theory of Change
IITS	Integrated Intelligent Transport Systems	ToD	Transit Oriented Development
IPF	Investment Project Financing	ToR	Terms of Reference
ITS	Information Technology System	UCs	Union Councils
JICA	Japan International Cooperation Agency	VKT	Vehicle Kilometer Travelled
KATI	Korangi Association for Trade and Industry	VOC	Vehicle Operating Cost
KCR	Karachi Circular Railway	WB	World Bank
KDA	Karachi Development Authority	WBG	World Bank Group
KMC	Karachi Metropolitan Corporation	WRI	World Resource Institute

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Pakistan	Karachi Mobility Project	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P166732	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
27-Jun-2019	31-Dec-2025

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective is to improve mobility, accessibility and safety along selected corridors in Karachi.

Components

Component Name	Cost (US$, millions)
Urban Road Infrastructure- Yellow Corridor	172.00
Development and Operationalization of a BRT System – Yellow Corridor	260.00
Capacity Building and Technical Assistance	6.00

Organizations

Borrower:	Islamic Republic of Pakistan
Implementing Agency:	Province of Sindh

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	438.00
Total Financing	438.00
of which IBRD/IDA	382.00
Financing Gap	0.00

DETAILS

Private Sector Investors/Shareholders

Equity	Amount	Debt	Amount
Government Contribution	18.50	IFI Debt	382.00
Government Resources	18.50	IBRD	382.00
Non-Government Contributions	37.50		
Private Sector Equity	37.50		
Total	**56.00**		**382.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026
Annual	0.00	10.00	40.00	75.00	90.00	80.00	70.00	17.00
Cumulative	0.00	10.00	50.00	125.00	215.00	295.00	365.00	382.00

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	High
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Substantial

8. Stakeholders	Substantial
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

1. SMTA Board: PA, Section I.A.1 of the Schedule

The SMTA Board, which comprises high level representatives of all the key stakeholders for the implementation of the Project, shall provide oversight of the implementation of the Project. For this purpose, the SMTA Board shall meet quarterly, or as often as required.

Throughout Project implementation period

Sections and Description

2. Transfer of Project roads responsibility to SMTA: PA, Section I.A.2(b) of the Schedule
The Project Implementing Entity shall take all actions needed to ensure that the responsibility for the maintenance and rehabilitation of the existing roads under the Project has been transferred to SMTA, including the contracting of civil works and the management of the supervision consultants.

No later than January 1, 2020

Sections and Description

3. SMTA Project Management Team: PA, Section I.A.3(a) of the Schedule
SMTA shall establish and maintain, under the leadership of the Project Director, a team of experts (whether civil servants or consultants) in adequate number, each with terms of reference, qualifications and experience satisfactory to the Bank, as and when their expertise will be needed in the views of the Bank for the efficient management of Project and the achievement of its development objective.

No later than one (1) month after the Effective Date, until Project completion

Sections and Description

4. SMTA staff: PA, Section I.A.3(b)(ii) of the Schedule
SMTA shall recruit an additional procurement and contract management specialist, a financial management specialist, a social management specialist, a gender specialist, an environmental specialist, a communication specialist, as well as engineers and technical staff as needed at that time.

No later than one (1) month after the Effective Date, until Project completion

Sections and Description

5. Project Consultants: PA, Section I.A.3(c)(i) and (ii) of the Schedule
SMTA shall recruit two firms on the basis of terms of reference, qualifications and experience satisfactory to the Bank, one to support SMTA for infrastructure project management and the other to support SMTA for the design, procurement and supervision of construction contracts and works for the Project.

No later than March 31, 2020

Sections and Description

6. Transfer of SMTA's Functions: PA, Section I.A.4 of the Schedule
The Project Implementing Entity shall ensure that none of the functions assigned to SMTA pursuant to the provisions included in or referred to in this Agreement are transferred or delegated by SMTA to any other entity, without the prior written agreement of the Bank and only on the basis of terms and conditions, qualification and experience satisfactory to the Bank.

Throughout Project Implementation

Sections and Description

7. Counterpart Funds: PA, Section I.B. of the Schedule
The Project Implementing Entity shall provide an amount at least equivalent to eighteen million four hundred thousand Dollars ($18,400,000) for the financing of the Project, to be disbursed as provided in the Annual Work Plans and Budgets (AWPB).

Based on AWPB approved by the Bank

Sections and Description

12. Safeguards : LA, Section I.B of Schedule 2 , and PA, Section I.C.1(a) of the Schedule
The Project Implementing Entity shall ensure, and shall cause SMTA to ensure, that the Project is carried out with due regard to appropriate health, safety, social, and environmental standards and practices, and in accordance with the Safeguards Instruments and the provisions of the Project Agreement.

Throughout Project Implementation

Sections and Description

8. Safeguards: PA, Section I.C.1(b) of the Schedule
The Project Implementing Entity shall ensure, and shall cause SMTA to ensure, that all measures are taken to implement the Compensation and Livelihood Rehabilitation Plan in a manner and timeframe satisfactory to the Bank. To this end, the Project Implementing Entity shall ensure that: (i) funds are made available to cover all the costs of implementing the Compensation and Livelihood Rehabilitation Plan; (ii) prior to carrying out activities which involve displacement, Affected Persons shall be compensated at full replacement cost, resettled and provided with resettlement assistance in accordance with the Compensation and Livelihood Rehabilitation Plan, as applicable; and (iii) the implementation, monitoring and evaluation of such Compensation and Livelihood Rehabilitation Plan is completed and reported in a manner satisfactory to the Bank.

Throughout Project Implementation

Sections and Description

9. Safeguards, Grievance Redress Mechanism: PA, Section I.C.7 of the Schedule
The Project Implementing Entity shall maintain, or shall cause SMTA to maintain, throughout Project implementation, and publicize the availability of, a grievance redress mechanism, in form and substance satisfactory to the Bank, to hear and determine fairly and in good faith all complaints raised in relation to the Project, and take all measures necessary to implement the determinations made by such mechanism in a manner satisfactory to the Bank.

Throughout Project Implementation

Sections and Description

10. Maintaining stable work force in SMTA and PMT: PA, Section I.A.5 of the Schedule
The Project Implementing Entity shall take all reasonable measures to build a strong and sustainable work force for the implementation of the Project, and to limit or when unavoidable mitigate to the extent possible the adverse impact of change of staff on the successful implementation of the Project and the achievement of its objective.

Throughout Project Implementation

Sections and Description

11. Safeguards, Reporting : PA, Section I.C.6 of the Schedule
The Project Implementing Entity shall, and shall cause SMTA to regularly collect, compile, and submit to the Borrower and the Bank, quarterly, and promptly in a separate report whenever the circumstances warrant or required by the Bank, information on the status of compliance with the Safeguards Instruments.

Throughout Project Implementation

Sections and Description

14. Project Operations Manual: PA, Section I.E of the Schedule
The Project Implementing Entity shall, or shall cause SMTA to, prepare and adopt a manual for the implementation of the Project, strictly in line with the terms and conditions set out in the LA and PA, and ensure that it will be at all time in form and substance acceptable to the Bank, and that the Project is implemented in accordance with the Project Operations Manual.

No later than three (3) months after the Effective Date, until Project completion

Sections and Description

13. Annual Work Plans and Budgets : PA, Section I.D of the Schedule
The Project Implementing Entity shall prepare or cause SMTA to prepare, and submit to the Bank for review and comments, a draft annual work plan and budget for the Project for each subsequent year of Project implementation, of such scope and detail as the Bank shall have reasonably requested. Each annual work plan and budget shall include all Project activities financed from the funds of the Loan, the Counterpart Funds, as well as any other sources of funds as may become available for the Project from time to time; and the evidence, in form and substance satisfactory to the Bank, that all environmental and social safeguard obligations related to the activities listed in the draft annual work plan and budget to be satisfied prior to their implementation pursuant to the provisions of the Safeguard Instruments have been satisfied. The Project Implementing Entity shall ensure that the comments from the Bank are reflected in each annual work plan and budget and that the Project is implemented in accordance with the annual work plan and budget approved by the Bank.

No later than one (1) month after the Effective Date, then annually until Project completion

Conditions

I. STRATEGIC CONTEXT

A. Country Context

1. **Pakistan, the sixth most populous country in the world is at a crossroad.** The economy accelerated with Gross Domestic Product (GDP) growth of 5.8 percent in FY18 and slowed down to 3.5 percent in FY19 as fiscal and external imbalances persisted[1]. Poverty declined from 64.3 percent in 2001 to 24.3 percent in 2015[2], but inequality persists. The country ranks low on the 2018 Human Capital Index, at 134 out of 157 countries. Gender disparities continue, and female labor force participation (FLFP) was only 20.1 percent in 2018[3]. Natural disasters and unreliable water and power supply constrain progress. After the onset of another boom and bust cycle, a new International Monetary Fund (IMF) program was negotiated in May 2019. Growth will pick up as structural reforms take effect and macroeconomic imbalances are addressed. Over the medium to long term, Pakistan needs to invest more, and better in human capital, raise more revenue, simplify doing business procedures, expand regional trade and exports, and manage its natural endowments sustainably, as articulated in Pakistan@100: Shaping the Future[4].

2. **Karachi with an estimated population of 15 million[5], is Pakistan's largest city, economic financial hub and main port.** It contributes 15 percent of national GDP and the largest share of national tax revenues, industrial employment, manufacturing and high-end services[6]. The city dominates the economic landscape of Sindh, with nearly all of the province's industrial and service economy and the majority of its labor force. It will continue to be the engine of economic growth for the country, given its size, location, and industrial and human capital. In recent decades, however, the city's livability and competitiveness have declined. It now ranks 137 out of 140 cities globally for livability. In the recent decades access to basic infrastructure and services have declined. Nearly half its residents live in informal settlements (katchi abadis), only half the city's water demands are met; public transport has deteriorated; and pollution is severe. Nonetheless, a substantial reduction in violent crime has been achieved through concerted government efforts.

3. **The Karachi City Diagnostic and Transformation Strategy identifies infrastructure gaps of over $9 billion.** Institutional strengthening and investments aiming to enhance livability, competitiveness and sustainability have emerged as priorities for Karachi. The Karachi Neighborhoods Improvement Project (*KNIP*), currently under implementation, aims to upgrade three neighborhoods and to improve ease of doing business in Karachi to strengthen citizen-state confidence and show early wins. Building on this, additional interventions in urban management and competitiveness, water supply and sewerage, and urban mobility and transport are being considered with support from the World Bank Group (WBG), Asian Development Bank (ADB) and Asian Infrastructure Investment Bank (AIIB). Maximizing Financing for Development approaches will be used to crowd in commercial financing as well.

[1] World Bank Group (2018). "Pakistan Development Update 2018 – At a Cross Road."
[2] Redaelli, Silvia (2018). "From Poverty to Equity – Pakistan at 100." World Bank Group.
[3] World Bank Gender Statistics 2017.
[4] World Bank. 2019. Pakistan at 100: Shaping the Future. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/31335 License: CC BY 3.0 IGO.
[5] Pakistan Bureau of Statistics, 2017 census, provisional summary
[6] World Bank, Transforming Karachi into a Livable and Competitive Megacity – A City Diagnostic and Transformation Strategy, Washington DC, 2018; p.2

B. Sectoral and Institutional Context

4. **The citizens of Karachi rely almost entirely on the road network for travel within the city**. The city has approximately 10,000 kilometers of roads, with local roads accounting for 93 percent and highways and arterial roads for less than 5 percent of the total length. Karachi has also six arterial or trunk roads that extend radially from the central area. There is currently no mass transit system per se. There are nearly 13.5 million motorized trips made each day within the city, of which about 42 percent are made by public and 58 percent by private transport. There were 3.6 million registered vehicles in Karachi as of mid-2015 (over 30 percent of the national total), and private vehicles—mainly motorcycles and cars—constitute about 84 percent of total registered vehicles, while public transport accounts for 4.5 percent of the total registered vehicles. With growth rates for private vehicles at over 4 percent, over 1000 new vehicles added to the streets of the city each day. There were over 12,000 public transport vehicles (including buses, minibuses, and coaches) serving 267 routes in the city. However, the number of buses has been steadily decreasing, and in 2017, reduced to less than 5000 vehicles serving about 100 routes. A city in the scale of Karachi should have at least 15,000 modern buses.

5. **Women have a particularly low economic participation rate in urban Sindh at 7.8 percent[7] compared to other provinces, which is attributed among other factors to the lack of affordable, safe and secure transport**. According to the Japan International Cooperation Agency (JICA) Household Survey, female ridership in public transport was less than 15 percent. The Government of Sindh (GoS) has included this issue in its "Vision 2025" with a target of 45 percent economic participation for women. This will require massive improvements in public and non-motorized transport suitable for their use.

6. **The analysis of household data collected in a JICA-sponsored study indicates that jobs in Karachi are highly concentrated within the inner city**. These centrally located jobs are often high skill "white collar" jobs, while employment opportunities for people with lower skill-sets and education qualifications are much more dispersed. As the city expands to accommodate a growing population, the poor increasingly live at the periphery. Travel from their low density, sprawling housing locations in the far suburbs to the equally spread out locations with suitable employment opportunities is costly and time consuming. This limits employment possibilities for the poor, especially women.

7. **As part of the study for Karachi Transportation Improvement Project known as JICA Master Plan of 2012, a Karachi Urban Transport Master Plan (KUTMP 2030) was developed**. KUTMP included Projects in the road sector as well, including 33 Projects along arterial roads with total length of 306 km and maintenance of existing roads. KUTMP has also identified priority mass transit Projects that Karachi needs to undertake to overcome the looming urban mobility crisis. These recommendations focus on immediate and future needs for which implementation steps are to be taken. KUTMP proposed 2 Metro Rail Transit (MRT) Corridors (KCR and KCR extension), 4 Light Rail Transit (LRT) Corridors (Blue, Brown, Yellow and Silver), and 5 BRT (Green, Red, Orange, Purple and Aqua). KUTMP prioritized the implementation of the KCR, and the Green, Orange, Red, Blue and Yellow Corridors. Due to financial considerations, GoS has decided to implement all 5 of the highest priority corridors as BRT. The Green Corridor is financed by the Federal Government and is being implemented by Sindh Infrastructure Development Company Limited (SIDCL). Its infrastructure is almost complete and SIDCL plans to involve the private sector in operating its bus services. The Red line will be financed by ADB and AIIB. The Orange Corridor financed and implemented by the GoS via the Sindh Mass Transit Authority (SMTA), is 50

[7] Labour Force Survey, 2017-2018, Thirty fourth issue, Pakistan Bureau of Statistics.

percent completed.

8. **In Karachi, urban infrastructure and service delivery is fragmented among national, provincial and local governments.** In recent years, many core city services have been centralized under the Government of Sindh (GoS) like solid waste, water and sewerage, mass transit, land use and building control, among others. Local councils represented by Karachi Metropolitan Corporation (KMC) and the six District Municipal Corporations (DMCs) deliver basic services in Karachi but suffer from limited financial resources and institutional and governance weaknesses. Institutional fragmentation and unclear or overlapping responsibilities have thus led to deterioration in the delivery of basic urban services.

9. **Multiple government departments and authorities are dealing with transport in the city with little coordination among them**. Various bodies—such as the National Highway Authority, GoS, KMC, Karachi Development Authority (KDA), Defense Housing Society (DHA), and cantonments—administer roads in Karachi. KMC is responsible for the administration of over 40 percent of roads in the city. The Transport and Mass Transit Department is the principal planning, regulatory, and implementing body of GoS responsible for dealing with all urban transport matters at the provincial level. Currently, responsibilities for major roads transport and traffic management within the city are shared between KMC and KDA. Fares for public transport are regulated by the Transport and Mass Transit Department under GoS. The District Regional Transport Authority (DRTA) issues route permission for public transport in Karachi. However, the decision making for the permission is governed by a board, with representation from the police, city government, and Provincial Transport Authority and DRTA. The public-private partnership (PPP) unit of the GoS is also assisting the Transport and Mass Transport Department in the development of mass transit initiatives in Karachi.

10. **SMTA was established in October 2016 under the Sindh Mass Transit Authority Act, 2014.** The Authority was created with the purpose of planning, developing, operating, maintaining and regulating mass transit systems in the Province of Sindh. Its core function is to provide safe, efficient, affordable, sustainable and reliable mass transit systems. SMTA has not been able to deliver as originally envisaged. It does not have an adequate technical team to face the challenges of planning and implementing a BRT system. GoS has transferred the management of the BRT operations along the Green Corridor to SIDCL. A Public Company named TransKarachi was registered with the Securities and Exchange Commission of Pakistan in August 2018 under Section 42 of the Companies Act of 2017. SMTA may assign some of its functions to be performed by TransKarachi.

11. **Weak systems and fragmentation of land management and service delivery mandates, among over a dozen agencies at different tiers of government, have undermined coordinated and inclusive development of Karachi and enabled large-scale encroachment of public land in recent decades.** Informal settlements and squatters are widespread, including residential and commercial encroachers on vacant lands, sidewalks, public spaces etc. A major Anti-Encroachment Drive (hereafter referred to as “AED”) was initiated in Karachi in October 2018 on the order of the Supreme Court of Pakistan. The Court ordered to vacate public spaces (parks, footpaths, amenity plots, etc.) across the city from unauthorized uses and occupations. The order is currently under implementation by various civic and local agencies, including KMC, who are required to report periodically to the Court on progress. The focus of the AED is on commercial activities encroaching public spaces. Thousands of businesses, street vendors and hawkers[8] have been affected, primarily in the most

[8] The Bank’s Policy on Involuntary Resettlement (OP 4.12) requires provisions to compensate or rehabilitate displaced persons and

commercial districts. Acknowledging the adverse impacts of AED on the poor and vulnerable groups, GoS and local agencies like KMC are making efforts to relocate some affected businesses. While the drive is widespread, it has not impacted (nor expected to impact) the Yellow Corridor given its well-defined right-of-way and land use pattern.

12. **Karachi is extremely vulnerable to natural and climate-related disasters.** Recurrent floods (due to poor drainage) and future rises in sea levels further complicate its urban mobility challenges. Expected temperature increase in Pakistan is higher than the expected global average increase, expected to reach +1.4-3.7°C by 2060. Warming is expected to be more rapid in the south and coastal zones, where Karachi is located. While Karachi is not affected by the flooding of Indus river basin in Northern provinces, the Lyari and Malir rivers (close to or traversing the Yellow BRT Corridor locations) could expose the Project location to some risk of river flooding. This means that there could be more than a 10 percent probability of damaging floods (above 0.5 m inundation depth) occurring in the next 10 years in this urban area – combining river and surface as well as "pluvial" floods. The Project area may experience a 40 centimeter rise in sea-levels over the course of the century. During the Project utility life (20 years), it will not be affected by rises in sea level as these will probably remain under manageable levels and affect the general urban fabric more than the BRT infrastructure. In the longer term (end of the century) the South and East districts of Karachi will be affected, along with the Project. Strong wind hazard resulting from cyclones is considered high according to ThinkHazard![9] for the East District of Karachi where the Yellow BRT Corridor is located. There is more than a 20 percent chance of potentially-damaging wind speeds (above 80 kilometers per hour) in the Project area in the next 10 years.

C. Relevance to Higher Level Objectives

13. **The proposed Karachi Mobility Project is aligned with the World Bank's Country Partnership Strategy (CPS) (FY15-20)[10] and with the twin goals of ending extreme poverty and promoting shared prosperity**. It is also aligned with the 2019 Pakistan at 100 report which highlights the necessary reforms required for Pakistan to become an upper-middle income country by 2047. It supports Results Area IV: Service Delivery by providing safe, and quality public transport system in Karachi. The Karachi Mobility Project specifically supports CPS Outcome 4.5: Improved urban management in cities by improving the livability through the provision of a sustainable mode of transport. The Project is also aligned with the Karachi's Strategic Development Plan (KSDP) 2020. It also supports the CPS by improving women's mobility and access to jobs and by maximizing finance for development and mitigating climate change. There is a strong development rationale for the public-sector support for the infrastructure construction under the Karachi Mobility Project, however the private sector will be involved in operating and maintaining the BRT system. The Bank has experience supporting the design and implementation of similar programs, such as in Dakar, Bogota, Mexico City, Dar es Salaam and other cities where the Bank supported the development of bus rapid transit systems.

14. **The Karachi City Diagnostic and Transformation Strategy[11] finds that a timely, comprehensive and**

allow for compensation of loss of livelihood. The design of this Project is fully informed by the implications of the ongoing AED, and comprehensive measures have been put in place to avoid and mitigate risks, consistent with Bank policies.

[9] http://thinkhazard.org/en/report/188-pakistan

[10] World Bank Group (2014) Islamic Republic of Pakistan: Country Partnership Strategy, 2015-2020 (Report No. 84645-PK), discussed by the Executive Directors on May 1, 2014, and extended by the Performance and Learning Review (Report No. 113574) distributed to the Executive Directors on an absence-of-objection basis with a closing date of June 15, 2017.

[11] Transforming Karachi into a Livable and Competitive Megacity: http://dx.doi.org/10.1596/978-1-4648-1211-8

programmatic phased approach is needed to improve Karachi's competitiveness, livability and sustainability. The Karachi Platform supports a coordinated and longer-term engagement through interventions in transportation, water, sewerage, competitiveness, livability and fiscal and environmental sustainability. The proposed Karachi Mobility Project (KMP) is aligned with Track 4 of the KSDP 2020, which aims to improve service delivery in water and sanitation, road construction and maintenance, solid waste, built heritage sites, public space development, safety and mobility, and green spaces management with a focus on disadvantaged neighborhoods. The KMP will leverage private sector financing to meet Karachi's infrastructure needs. It will also build resilience to climate change and geophysical hazards, as a vital step for sustainable development. The proposed corridor will incorporate climate change and disaster risks considerations in its design and construction.

II. PROJECT DESCRIPTION

A. Project Development Objective

15. **PDO Statement:** The Project Development Objective is to improve mobility, accessibility and safety along selected corridors in Karachi.

16. **PDO Level Indicators:** The key results that will measure the achievement of the PDO are as follows:
(a) Daily number of public transport trips on the BRT system (passengers per day), of which women ridership (percentage),
(b) Car travel time during peak hour along the Yellow Corridor,
(c) Modified Urban Accessibility Index (Percentage of trip jobs within the Corridor catchment area out of all work trips in Karachi that are accessible within 60-minute commute by walking and taking the Public Transport System)
(d) Annual number of road traffic fatalities broken down by road user type.

B. Project Components

17. **The delivery of the Project is designed around a mix of publicly procured contracts needed to deliver the Project infrastructure and consultancies.** It also includes a PPP contract for the operation of the BRT system over a 10-year concession period, whereby a private operator will finance, procure, supply, operate and maintain various goods and systems (e.g. Bus Fleet, ITS, fare collection, depot equipment, etc.). Based on the financial analysis, and to minimize the operating subsidy, it was agreed that the Project will support the Concession via a working capital subsidy. This will be specified upfront to all bidders and will will reduce the monthly charge to be paid to the selected Concessionaire.

18. **Component I: Urban Road Infrastructure - Yellow Corridor (US$170.9 million of which expected IBRD financing in US$157.5 million and GoS financing of US$13.4 million)**. All investments under this component are eligible for financing by the Project except the shifting of utilities and the implementation of the Compensation and Livelihood Rehabilitation Plan (CLRP), both of which will be fully financed by GoS. This component includes:

(a) Rehabilitating or reconstructing road infrastructure (including improving and shifting related utilities

such as street lighting, sewer/water supply, drainage, oil pipeline), bridges and non-motorized transport facilities (such as motorcycle lanes, footpaths and pedestrian crossing) along the Yellow Corridor and its direct and feeder service routes;
(b) Implementing environmental and social recommendations and mitigation measures before and during construction; and
(c) Carrying out detailed designs, construction supervision activities and third-party monitoring.

19. **Component II: The Development and Operationalization of a BRT System - Yellow Corridor (US$260.0 million of which expected IBRD financing in US$218.5 million, GoS US$4.0 million, and Private Sector US$37.5 million).** All investments under this component are eligible for financing by the Project except the implementation of the social management plan which will be fully financed by GoS. This component includes:

(a) Constructing and equipping bus rapid transit facilities (including segregated busways, interchange facilities, stations, terminal and depots) along the Yellow Corridor;
(b) Providing working capital subsidy for the concession of the BRT operation for the Yellow Corridor;
(c) Implementing social management and impact mitigation measures including the labor redeployment for the affected existing bus operators such as drivers, conductors and route managers;
(d) Implementing and monitoring the Social Management Plan including its actions to mitigate gender-based violence and actions to improve women's mobility and economic participation options;
(e) Designing a transit-oriented development strategy for the Yellow Corridor;
(f) Providing PPP transaction advisory services for BRT operation concession; and
(g) Carrying out a program of regular engagement with key stakeholders; and implementing a public relations and media strategy to generate support for and disseminate information on the bus rapid transit system.

20. **Component III: Capacity Building and Technical Assistance (US$6 million of which expected IBRD financing in US$5 million and GoS US$1 million).** All investments under this component are eligible for financing by the Project. This component includes:

(a) Supporting Project management and providing technical assistance for the implementation of social measures;
(b) Provision of technical assistance in traffic management and road safety;
(c) Supporting the regional transport authorities in automating the management and monitoring of bus route permits; and
(d) Carrying out capacity building activities to strengthen SMTA and support the consolidation and improvement of the management of the urban transport sector in Karachi.

21. **Project Cost Summary.** The following Table provides a summary of the Project cost.

Table 1: Indicative Project Costs and Financing[12] (US$ million)

	Project Components	Cost	IBRD	GoS	Private Sector
1	**Urban Road Infrastructure - Yellow Corridor**	**170.9**	**157.5**	**13.4**	**-**
1.1	Yellow Corridor Reconstruction, including Pedestrian and Motorcyclists facility and traffic management	116.0	113.9	2.1	-
1.2	Off Corridor Improvement along the Direct and Feeder Services	12.1	12.1	-	-
1.3	Utilities relocation and improvement (drainage, telecommunication, sanitary, lighting etc.)	10.7	-	10.7	-
1.4	Compensation and Livelihood Rehabilitation Plan (vendors)	0.4	-	0.4	-
1.5	Environment Management Plan	3.0	3.0	-	-
1.6	Detailed Design, Bidding Documents and Construction Supervision	15.0	15.0	-	-
1.7	Third Party Monitoring	0.7	0.7	-	-
1.8	Physical Contingencies	6.5	6.4	0.1	-
1.9	Price Contingencies	6.5	6.4	0.1	-
2	**Development and Operationalization of a BRT System – Yellow Corridor**	**260.0**	**218.5**	**4.0**	**37.5**
2.1	BRT Infrastructure (busways, stations, shelters, terminals, depots)	118.1	118.1	-	-
2.2	Working Capital for the Concession Agreement of the BRT Operation	118.0	80.5	-	37.5
2.3	Social Management Plan of existing bus operators Yellow Corridor, including Labor Redeployment Services	4.0	-	4.0	-
2.4	TA for GBV and Gender Action Plan	0.5	0.5	-	-
2.5	TOD strategy along Yellow BRT Corridor alignment and area of influence	1.0	1.0	-	-
2.6	TA for PPP Transaction Advisory Services	0.5	0.5	-	-
2.7	Stakeholder engagement, public relation and media strategy	1.0	1.0	-	-
2.8	Physical Contingencies	8.0	8.0	-	-
2.9	Price Contingencies	8.9	8.9		
3	**Capacity Building and Technical Assistance**	**6.0**	**5.0**	**1.0**	**-**
3.1	Project Management	2.0	1.0	1.0	-
3.2	TA on traffic management and road safety	1.0	1.0	-	-
3.3	TA to support Regional Transport Authority	1.0	1.0	-	-
3.3	Capacity Building of SMTA and Institutional Strengthening	2.0	2.0	-	-
	Project Cost	**436.9**	**381.0**	**18.4**	**37.5**
	Front end Fee	1.0	1.0	-	-
	Total Project Financing	**437.9**	**382.0**	**18.4**	**37.5**

[12] All figures are rounded to the nearest tenth decimal place.

C. Project Beneficiaries

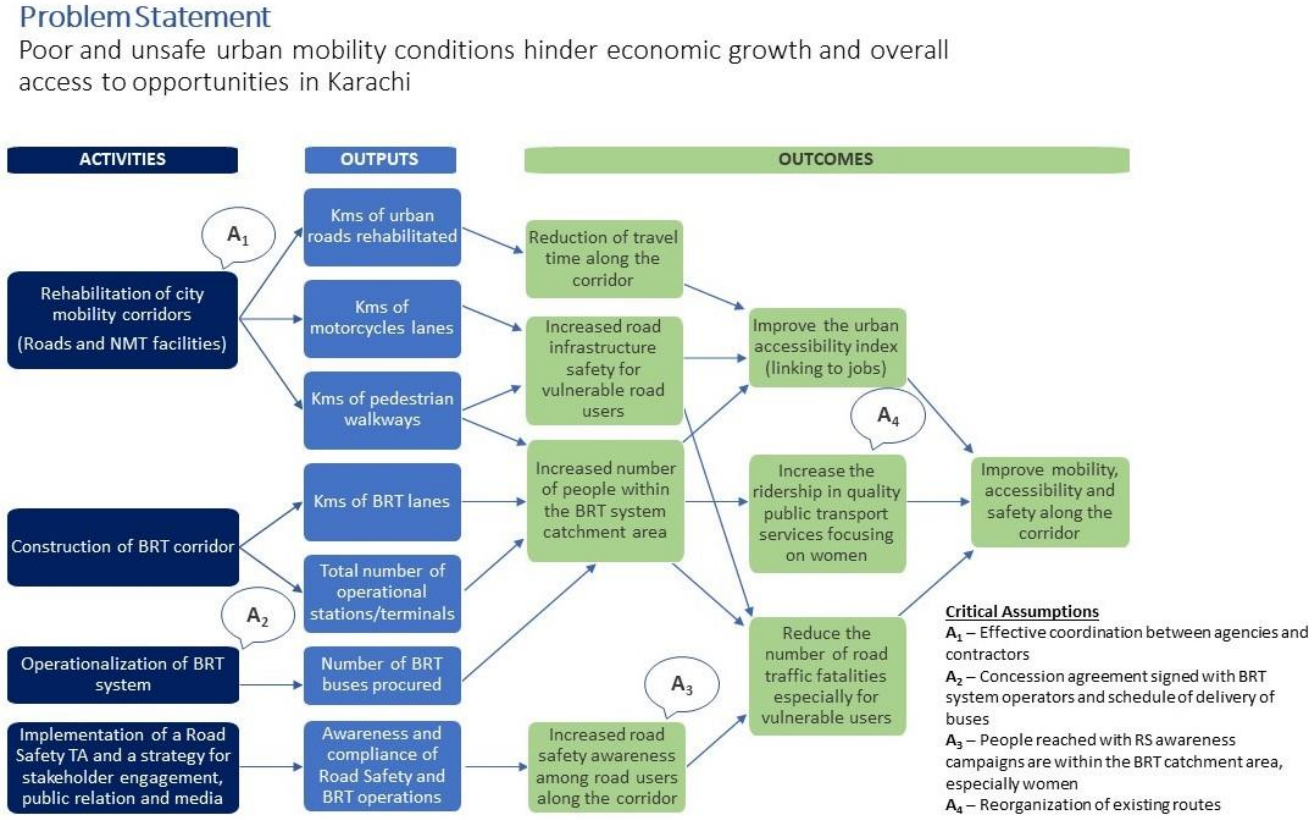
22. **A mapping of employment opportunities (see Annex 2) finds these opportunities to be centered along the BRT route (Yellow Corridor).** The analysis of household trip surveys collected in a JICA-sponsored study (2012) indicates that job opportunities in Karachi are highly concentrated within the catchment area of the BRT corridor. The highest concentration of jobs can be found in Bilal Colony (Korangi). About 70% (197,500 out of 270,000) of all work trips that end in Bilal Colony originate along the BRT corridor.

23. **700,000 work trips in the catchment area can be completed within a 60-minute commute by walking and using the public transport system**. The Project will benefit those living and working along Surjani Town (Green Corridor) and Korangi Industrial area (Yellow Corridor). The latter area has the highest employment density in Karachi –over 60,000 persons per sq.km – according to a JICA study. The Yellow BRT Corridor Project will effectively connect these two catchment areas.

24. **Women riders are expected to benefit substantially from the proposed Project**, as it will provide safe and secure accessibility for women (and people with limited mobility) to jobs and other economic activities.

D. Results Chain

25. **The following diagram presents the Theory of Change (ToC) behind this Project**.



E. Rationale for Bank Involvement and Role of Partners

26. **The WBG is uniquely positioned to assist Karachi in addressing public transport reform and investment issues given the Bank's extensive experience in this area.** It brings practical global experience drawing on its engagement in urban transport with several megacities around the world including Mumbai, Jakarta, Lagos, Manila, Mexico City and Bogota. Moreover, the Bank is planning a multi-sectoral engagement in Karachi with transport at its center. Global evidence indicates that safe public transport facilitates women's access to jobs, childcare, education and health opportunities and leads to increase in women's economic participation.

27. **The Bank's approach recognizes that the transformation of Karachi's public transport sector will need a sustained and long-term engagement bolstered by multi-stakeholder coordination.** The Bank will play a lead coordinator role with the various stakeholders at different government levels. This Project is a strategic catalyst, aiming to demonstrate that quick, visible, positive results are possible by partnering with provincial government, local government, and private sector and civil society. In the long term, the Bank is envisaged to play a major role in supporting deep institutional reforms that will address concerns of vulnerable groups including women.

F. Lessons Learned and Reflected in the Project Design

28. **The Project design takes stock of country-specific lessons and of international best practices.** Over the last two decades the World Bank has been supporting public transport activities in over 30 countries. Success and failures of BRT systems in Bogota, Jakarta and Dar es Salaam were considered in the Project design. The recent experience of BRT design and implementation along the Orange and Green corridors were also taken into consideration, as well as the design of the Red corridor.

29. **The Project design also considered the experiences of already functional Lahore, Islamabad and Multan BRT Projects, and the under-construction Peshawar BRT Project.** The Project has coordinated closely with SIDCL and ADB and has tried to incorporate preparation and implementation experiences. It recognizes that the full potential of constructing a BRT system cannot be achieved until complementary interventions to upgrade the entire corridor are not carried out, including improving the geometry and pavement of existing roadway. The Project also recognizes that as part of an interconnected network, station designs, and other operational aspects should be kept uniform. The Project will include designs that are conducive for women and other vulnerable groups using BRT.

30. **Commitment from the higher leadership is key to the success of the Project.** GoS has already demonstrated its strong ownership and commitment, not just to this Project, but to the mass transit program in Karachi. In addition, the Government of Pakistan is also supporting mass transit in Karachi by financing the Green BRT corridor infrastructure and bus operations. Furthermore, ADB will finance the Red Corridor which also lends further support to the BRT network in Karachi.

31. **The Project takes into consideration the fact that, historically, a plethora of entities with overlapping mandates have been involved with public transport in Karachi - with limited results**. While the current situation remains far from ideal, the Project will focus on strengthening and building capacity of the existing relevant institutions, specifically SMTA. For this very reason, the Project aims to fully empower SMTA to

implement the Project, rather than setting up an exclusive standalone Project Implementation Unit.

32. **Stakeholder consultation and an effective communication strategy will be critical.** The Project has carried out extensive consultations with all stakeholders, including KMC, KDA, Transport Ittihad, Korangi Association of Trade and Industry (KATI), local administration, Non-Government Organizations (NGO) and others, and will continue stakeholder engagement throughout Project implementation.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

33. **Implementation period of the Project is planned for six and a half (6.5) years (July 2019 to December 2025).**

34. **The Project's Implementation Arrangements cannot be designed in isolation of the existing institutional arrangements in the urban transport sector**. SMTA remains a nascent and understaffed authority, and needs support to be able to plan, design, implement and manage mass transit systems in Karachi and other cities of Sindh. Its organogram shows 69 professional positions, of which only 19 have been filled.

35. **International experience finds that SMTA should focus on defining a policy for transport integration in Sindh, including regulations, strategic planning, and design of mass transit systems**. For this, SMTA shall select staff with the required background who will be further trained to implement these activities throughout the Project lifecycle. SMTA may delegate some of its functions to TransKarachi, especially the management of the operations and maintenance of the mass transit corridors once they are built.

36. **Project oversight will be the responsibility of the SMTA Board.** A separate Project Steering Committee is not envisaged as all concerned stakeholders are already part of the SMTA Board. The Board may co-opt any person as a Member of the Board for any particular purpose, but such person shall not have right of vote. SMTA and Sindh Transport and Mass Transit department will ensure meetings of SMTA Board are held regularly i.e. at least once a month for the first year of Project implementation.

37. **The Project does not envisage a separate standalone Project implementation unit.** An internal Project Management Team (PMT) comprising of existing SMTA staff will be notified and will be supported by management and technical consultants as necessary. This arrangement will allow the Project to build SMTA's capacity, which is not possible with a Project Implementation Unit (PIU) model that is normally staffed with individual consultants. The Project Management Team will consist of staff from the Directorates of Planning, Projects, Bus Operations, ITS and Business Development. The Project Director is expected to be notified before no later than one month after Project effectiveness. SMTA has already started the process of hiring key positions including specialists on Environment, Communications and Gender, and Secretary of Board. Moreover, SMTA plans to continue the recruitment process by onboarding social, procurement, financial and contract management specialists. All the above positions will be filled no later than one month after Project effectiveness. Additional engineering and technical staff will be hired as per requirement before commencement of civil works.

38. **The Project Management Team will receive support from a dedicated infrastructure Project**

management firm that includes technical experts in BRT implementation. This firm will be hired under the Project for a period of three years to give proper skills and to strengthen the Project Management Team using the learning by doing and on the job training approaches. This assistance will be financed under component 3 of the Project. The PMT may also draw on a Shared Services Unit to tap into additional expertise as needed.

39. **The operation and maintenance management function may be exercised by TransKarachi** that is being formed under the Red BRT Corridor Project with funding from ADB over 3-year period. The Bank will coordinate with ADB on capacity building and institutional strengthening.

40. **The GoS, through SMTA, will undertake a Private-Public Partnership (PPP) for the provision of the following tasks: (i) vehicle procurement and operations of BRT services, (ii) supply and maintenance of an Integrated Intelligent Transport Systems (IITS), and (iii) station management along the Yellow Corridor**. Through an international competitive selection process, a privately-owned Concessionaire will be selected to deliver the above tasks. GoS will provide a capital subsidy financed by the Project, as needed, up to a maximum amount of US$80.5 million which will be used by the private operator to finance the cost of buses, IITS and fare collection system, depot and other ancillary equipment.

41. **The maintenance and rehabilitation of the existing road infrastructure is the responsibility of KMC.** For the implementation of Component I and II, GoS will issue the necessary directives to hand over responsibility of the entire corridor from Numaish to Dawood Chowrangi to SMTA. SMTA will be responsible for contracting the civil works and managing the supervision consultants. SMTA will also be responsible for managing the implementation of the CLRP.

42. **Component-III involves a Technical Assistance in traffic management and road safety activities**. Multiple stakeholders are involved in this component, including KDA, KMC, Traffic Police and Health Department.

B. Results Monitoring and Evaluation Arrangements

43. **A Third-Party Monitoring firm in collaboration with the Planning and Development Department will implement a continuous program of results monitoring and evaluation.** Indicators will come from several sources, including progress reports from civil works contracts (for all physical outputs measured by kilometers), fare ticketing system (for BRT ridership), traffic police and hospitals (for number of road fatalities), and from Environmental Management Plan (EMP), Social Management Plan (SMP) and CLRP implementation. A tailored customer satisfaction survey will be designed and implemented several months after start of the BRT operation. The urban accessibility index will be measured again using the World Bank tool that was used to estimate the target for this indicator.

44. **Reporting on the requirements set forth in the EMP and SMP will be prepared by the SMTA.** SMTA will submit quarterly reports to the Bank for review using information from consultant supervision reports. Brief monthly progress reports will also be submitted for Bank review. An Engineering Firm (Consultant Supervision) will be procured by SMTA to monitor and report progress on construction. The firm will include experts in geometric, pavement, structure and BRT design, safety, environmental, social and contract management among others. In addition, semi-annual implementation progress reviews shall be carried out each year jointly by the Borrower and the Bank. These reviews will cover, inter alia: (a) progress in meeting the

Project's objectives; and (b) overall Project performance against Project monitoring indicators. A Mid-Term Review will be undertaken not later than 36 months after Effectiveness to more comprehensively assess implementation progress and set out any measures to ensure continued efficient implementation and the achievement of the PDO by the Project's closing date.

C. Sustainability

45. **The PPP arrangements for the operations and maintenance of the BRT system will ensure sustainability of quality services delivered by private operators.** A Concessionaire will be selected through an international competitive bidding process to finance, operate and maintain bus operation and IITS services and to manage the stations along the Yellow Corridor. The World Bank may also offer a credit enhancement to the prospective bidders for the (Operations and Management) O&M contract in the form of a payment (and/or loan) Guarantee, which will lower the risk and widen the competition, thus contributing to the long-term financial sustainability of the system.

46. **The Project infrastructure will be disaster and climate resilient**. The structures will conform to the relevant codes related to earthquake zoning and will also ensure adequate surface and sub-surface drainage is built into the infrastructure design to cater to any potential flooding. Weather resistant material will be used for the road construction. The paving material will be such that it will withstand extreme weather conditions of heavy rains and high temperatures. The surface material will be specially selected to resist water and prevent it to be washed away. Storm water drainage system will be constructed along the corridor to avoid flooding of the road. The capacity of the drainage system is designed in anticipation with extreme weather conditions predicted under international climate change models for Karachi region to cater for maximum storm water runoff.

47. **The proposed Project will focus on climate change adaptation and mitigation measures and other environmental Co-Benefits.** It will shift road users from polluting transport modes (e.g. old, poorly maintained buses and motorcycles) to lower carbon modes (e.g. cleaner BRT buses and non-motorized transport) and ensure better traffic flow, and use climate-resistant material for road construction, an appropriate drainage system and incorporate features at Stations to attenuate heat waves. It will also reconstruct the existing Jam Sadiq bridge crossing the Malir river and will construct a new one parallel to it doubling the road link's capacity. Similarly, it will reconstruct the southern side of the Kala-Pull bridge.

48. **A storm water drainage system will be constructed for the underpasses.** The underpass roads will be sloped to collect water at grates that will lead to the drainage pipe and collection pits. Submersible pumps will be installed at the collection pits to discharge storm water to the nearby storm water drain network. A set of submersible pumps will also be added to serve as backup pumps. The capacity and the number of collection pits and submersible pumps will be computed based on extreme weather conditions predicted under international climate change models for Karachi region. Generators will be installed at each underpass as a power backup for the submersible pumps because of power outage issues during rainy season.

49. **The Project is also ensuring institutional sustainability by building capacity within the SMTA.** The Project will be implemented through SMTA's staff, rather than setting up a separate Project implementation unit. This will ensure long term ability of SMTA to implement and manage other mass transit Projects in Karachi and other cities in Sindh.

50. **The Project will be closely coordinated with ADB and AIIB which are providing funding for the Red BRT Corridor.**

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical Analysis

51. **The proposed Project is part of a long-term vision for Karachi, one that is served with safe, reliable, efficient and accessible sustainable transport services.** At the center of this Project is a Bus Rapid Transit (BRT), which is intended to form the backbone of a fully integrated and extensive transit system for the city, enabling public transport to become the mode of choice for travel. In addition to the BRT Project, a comprehensive approach to the incorporation of digital development aspects has been put in place including smart fare collection, website development, Integrated Intelligent Transport System (IITS), two fiber optic pipes as well as other smart applications and tools to manage bus operations and feedback from beneficiaries.

52. **The KMP has been structured following international best practices in the design and implementation of BRT systems adapted to the Pakistani and Karachi contexts and needs.** More specifically, it will follow the Integrated Corridor Management Approach[13] which will cater to the needs of all road users along the Corridor, thus expanding the targeted group of beneficiaries. The focus will be on non-motorized transport, public transport users, and powered two and three wheelers. Severely deteriorated road sections along the Corridor and catchment areas will be improved, traffic management will be upgraded, and parking issues will be addressed.

53. **The Yellow BRT corridor is developed primarily along Korangi Road.** It connects Karachi's southeast suburbs, characterized by dense industrial and residential land uses, with the city's central business district with thriving and dynamic commercial, institutional, cultural, and religious activities. The Korangi industrial area alone has the largest employment density in Karachi, with a figure of more than 60,000 persons employed in a square km. The Corridor is 21 km long starting from Dawood Chowrangi in Landhi District (southeast Karachi). It follows Korangi Industrial Road (8000 Road), crosses Malir river and KPT interchange, and then progresses east into Shahrah-e-Faisal Road to finally reach Shahrah-e-Qaideen Road. It leads directly into Numaish BRT hub with direct interconnectivity with services and catchment areas covered by the Green, Blue and Red BRT corridors. Details of the Corridor alignment are provided in Annex 2.

54. **The BRT corridor will have 20 km of dedicated busway and 1 km operating in mixed traffic under KPT interchange, on FTC interchange and along Shahrah-e-Faisal Road.** The BRT busway will follow the design of median aligned lanes with 28 median stations. It will have a small depot near Dawood Chowrangi to serve as terminal and a larger Depot along Landhi road for overnight parking and maintenance. Keeping in view the long-term sustainability vis a vis O&M of the busway infrastructure, the Project has proposed rigid pavement for the BRT lanes. This was based on experience of the Lahore and Islamabad BRTs, where flexible pavement failure

[13] Integrated Corridor Management for Urban Transport, Zimmerman Sam, Dahdah Said and Wei Wang, Transportation Research Record, Journal of Transportation Research Board, January 2012

was evident just after a few years of use.

55. **Korangi Road and its vicinity evolves from a generator/attractor of trips within the Karachi district (Shahrah-e-Faisal to KPT interchange) to a predominantly trip attractor within the Industrial area towards the southeast.** Conversely, the catchment areas within the 1.5 to 4 km influence area are predominantly trip generators with strong and dense residential areas and various local commercial activities. Thus, these areas depend directly on the Korangi Road alignment to reach main activities and services within greater Karachi. Serving these catchment areas is essential, and extended services to and from the main corridor are recommended either in the form of Feeder or Direct services. A hybrid service plan (trunk, direct and feeder routes) will be implemented along this Corridor and its catchment areas.

56. **The expected Ridership forecast by 2023 is 300,000 passengers per day**. The service plan consists of 4 Trunk services, 5 Direct and 3 Feeders. The bus fleet will be a combination of 131 18-m articulated to service the trunk routes and 117 12-m buses for the direct and feeder routes (including 8 percent reserve fleet). Commercial speed for the busiest trunk services is about 27 km/h with a bus headway of 2 - 3 minutes during peak hour. Based on a comparison of alternatives suitable for Karachi's conditions, a Diesel-Hybrid with regenerative braking system will be used.

Economic Analysis

57. **A standard cost-benefit analysis for road and public transport was used to assess the economic impact of the Project.** The economic evaluation accounted for the Project capital investments as well as operation and maintenance costs while calculating the economic benefits in term of savings in travel time, reductions in vehicle operating costs, reduction in CO_2 emissions and traffic fatalities.

58. **Travel demand was estimated using a purpose-built demand model using Emme[14] Version 4.3.5.1.** The majority of the projected BRT passengers were previously taking existing bus, minibus, and coach services. Fare was assumed to be distance-based, ranging from PKR 15 to 55, and averaging PKR 35 ($0.25). Given this fare, 5 percent of impacted rickshaw users, 4 percent of impacted motorcycle users, and 2.6 percent of impacted private car users would shift to the BRT. With this level of modal shift, 51 percent of the passengers of the BRT would otherwise have taken minibuses, 15.8 percent large buses, 29.8 percent coach minibuses, 1 percent rickshaws, 1.3 percent passenger cars, and 1.1 percent motorcycles, in the first year of operation. Over time, the BRT stabilizes transit mode share, compared to a baseline where transit use would decline.

59. **The average Vehicle Operating Cost per kilometer travelled (VOC/km), the Travel Time Cost per kilometer travelled as well as grams of CO_2 emission per kilometer travelled were estimated for each vehicle type with and without the Project using the HDM-IV model calibrated to Karachi's fleet and road conditions.** The total annual public transport vehicle-kilometer travelled (VKT) was estimated from the travel demand model with and without the BRT. The Project will result in a 32.9 million reduction in the VKT of the existing buses (coaches, mini-buses and large buses) in the first year due to closure of several of the bus routes and the shift of their users to the BRT system offering higher passenger capacity per bus-unit. The Project will also result in a reduction of 8.5 million and 5.3 million of VKT of personal cars and motorcycles respectively due to shift from private transport modes to the BRT system. The value of time was derived from the traffic model and the stated

[14] Emme is a Transportation Planning Software.

preference surveys, which was PKR 63 per hour for transit passengers, motor rickshaw passengers, and motorcycle passengers, and PKR 170 per hour for private car users.

60. **Crash data collected between 2011 and 2015 showed that on average, there was about 100 fatalities per year along the Yellow Corridor and 1,500 serious injuries.** A WRI study of the impact of the wall-to-wall corridor reconstruction on the BRT corridors in Ahmedabad, with a traffic mix of motorcycles, motor rickshaws, and informal transit vehicles, comparable to Karachi, was a 55 percent reduction in fatalities, and a 28 percent reduction in injuries. In this Project it is assumed a fatality reduction of 50 percent and 30 percent reduction in serious injuries. The value of statistical life used is $106,000 and a value of serious injuries of $26,500 using the International Road Assessment Program[15] **.** This resulted in approximately $25.0 million saving from road crashes during the first year of operation.

61. **Data on the VKT, ridership, and modal split with and without the Project were taken from the traffic model.** Emissions impacts for various bus alternatives were then evaluated in terms of tons reduced per year. Fuel efficiency and carbon dioxide (CO_2) emission factors were updated for a typical vehicle mix in Pakistan. On average, the BRT Project reduced about 28,000 tons of CO_2 per year, well-to-wheel. The average annual economic value of the reduced emissions was $2.0 million per[16], using Diesel-hybrid buses. The Project will also result in reduction in local air pollutants (PM, NOx and others) but these were not quantified.

62. **Results and Sensitivity.** As shown in Table 2, the Project EIRR was found to be 17 percent. The analysis included sensitivity tests to ensure a robust result. These tests considered (i) a 20 percent capital cost overrun; (ii) a 20 percent reduction in passenger ridership; (iii) a 1-year delay in system opening, and iv) all three risks combined. None of the tests brought the Project below the 8 percent minimum EIRR, and the NPV calculated with an 8% discount rate remains positive in all scenarios.

Table 2. Economic Analysis Summary

	Base (VOC, Travel Time, Safety and CO_2)	**Base without social value of CO_2 saving**	**CAPEX @+20%**	**Ridership @ -20%**	**BRT system Opening delay (1 year)**	**CAPEX @ +20% Ridership @ -20% BRT system opening delay (1 Year)**
EIRR	17%	16%	14%	15%	14%	10%
NPV ($ Millions)	368	340	281	287	251	101

Financial Analysis

63. **The World Bank loan will cover various civil works and consultancy contracts, the environmental management plans and equipment, and a working capital subsidy for the BRT operation, with an expected 10-year lifespan.** SMTA is not responsible for repaying the capital cost of the loan. GoS will consider the capital cost (including that of the BRT infrastructure and capital subsidy for the operation) a grant and does not intend to recover this investment from the system's operational revenues. The government intends to ensure the system's

[15] Dahdah Said, McMahon Kate (2008) The True Cost of Road Crashes: Valuing life and the cost of a serious injury, , the International Road Assessment Program.
[16] World Bank Guidance note on shadow price of carbon in economic analysis, Nov 12, 2017. Medium estimate was used.

financial sustainability and to limit the need for operational subsidies troubling other existing BRT systems in Pakistan, such as in Lahore, Islamabad-Rawalpindi or Multan.

64. **A financial model was developed based on the selected operational plan for the Yellow BRT corridor**, i.e. distance-based fares ranging from 15 to 55 PKR with 5 PKR increase every 2 km and a fleet composed of 12 and 18-meter vehicles. Three factors significantly impact the financial results: i) bus and fuel technology, ii) who is paying for the initial fleet, and iii) the operational cash flow margin of the BRT vehicles operator and system control service providers (station management, fare collection, etc.). The financial analysis considered the following 3 scenarios for covering the capital cost of the initial BRT fleet: (i) Government will cover the full cost of initial fleet, ii) the Private sector will provide 50 percent of the cost of the initial fleet, and iii) the private sector will cover the full cost of the initial fleet. The cost-sharing of the initial fleet between the Government and the private sector in a bundled concession agreement is the recommended approach. The availability and price of CNG (either imported or from biomethane produced for the Red BRT corridor) in a few years will also play a factor in the final decision.

65. **The BRT system generates revenue in several ways: fares, advertising, rent on concessions and storefronts in stations and depots.** Land value capture can also yield revenue if a well-planned Transit-Oriented Development (ToD) strategy is implemented; this latter will be developed under this Project. In 2023, fare revenue, the largest source, is estimated to be PKR 3,239 million ($23.1 million), using a distance-based fare that averages PKR 35 ($0.25) per trip. Advertising revenue is estimated to be PKR 487 million ($3.47 million a year), while revenue from concessions is estimated at PKR 140 million ($1 million), based on the current market price of equivalent commercial real estate per square meter. The total revenue ($27.6 million) will be used to partially cover the O&M expenses which is estimated at $39 million. A ToD Strategy will be developed for the Corridor under this Project which will include finding of additional revenues that will be used in the BRT system. A financial clearinghouse company will collect and distribute fare revenue. Vehicle operation fees will be paid on a per kilometer basis. Station services, including cleaning, security, and staffing, will also be contracted out.

B. Fiduciary

Financial Management

66. **The Financial (FM) arrangements are satisfactory for meeting the requirements of Bank Policy for Investment Project Financing (IPF) effective October 1st, 2018.** An assessment of SMTA's FM arrangements concluded that SMTA adequate maintains financial management arrangements and that the overall arrangements in place for implementing the Project provide reasonable assurance that proceeds of the Bank loan will be used for their intended purpose. The Sindh Mass Transit Authority Act, amended in 2016, requires that the Authority establishes sound internal control systems with a fully functional Internal Audit Function. The accounts are prepared in accordance with the government accounting policies and procedures and the financial statements are to be audited by the Chartered Accounting firm acceptable to the bank. In addition, Auditor General of Pakistan also undertakes financial statement audit of the authority. A unified public financial management system exists at all three levels of government in Pakistan. The New Accounting Model (NAM), which includes the Chart of Accounts (CoA) prescribed by the Auditor General of Pakistan will be used for the Project. Consequently, the financial management operations will use the country systems and procedures. SMTA has relevant experience in executing similar Projects including the Orange BRT corridor. Financial Management team is in place, but an additional resource dedicated to the KMP will be required within three

months of Project effectiveness. External audit for the Project will be conducted by the Department of Auditor General (DAGP) and the audit report and Management Letter will be submitted to the Bank within six months of the close of financial year (by December 31).

67. **Disbursements will be report-based with advance equivalent to six months forecast of expected payments**. A segregated designated account will be established at the National Bank, following the procedures notified in August 2013 by the Finance Division, Government of Pakistan. Eligible expenditures will comprise: works, consulting and non-consulting services, goods, training, incremental operating costs incurred for implementing the Project, and payment of front-end fee.

68. **The FM arrangements provide reasonable assurance that the financing proceeds will be used for the intended purposes, with due attention to the principles of economy, efficiency, effectiveness, transparency, and accountability to support implementation and achieve the desired results.** This objective will be sustained by ensuring that strong financial management systems are maintained for the Project throughout its duration. Detailed Financial Management reviews by the bank will also be carried out regularly, either within the regular proposed supervision plan or a more frequent schedule if needed, to ensure that expenditures incurred by the Project remain eligible.

Procurement

69. **All Project procurement shall follow the requirements set forth or referred to in the Bank's "Procurement Regulations for Borrowers under Investment Project Financing (IPF)", dated July 1, 2016 (and as subsequently revised)**. The Project includes large works contracts, small civil works, supply and installation of equipment, goods, and some consultancies.

70. **A Project Procurement Strategy for Development (PPSD) was prepared.** It identified the market potential of local and international market players, assessed SMTA capacity, identified areas to be strengthened, and the overall risks to the Project implementation. A procurement plan (see Annex 1) was developed based on the market assessment and packages will be crafted to ensure optimum response.

71. **A contractors' workshop is also planned to be held to highlight the salient features of the KMP and of Bank procurement procedures.** This will enhance market participation. It is expected that the Bank will support the SMTA in enhancing the skills of Project Staff on Procurement and Contract Management throughout implementation. A two-day training on World Bank's "Procurement Regulations for Borrowers" was delivered during Project preparation to ensure that, among others, initial tendering is carried out correctly and on a timely basis. All supervision missions will include dedicated sessions on procurement to key personnel.

72. **The Project Procurement would comprise of the following publicly procured contracts: Nine civil works packages,** two large works for road rehabilitation and BRT infrastructure (US$175 million and US$50 million); and 7 medium and small contracts including a 1 km long bridge (US$24 million); two bus depots (US$7.8 million and US$12.7 million), several off-corridor minor rehabilitations works and installation of bus shelters (US$12 million total) to be procured using both ICB and NCB methods. The bidding process for civil works will be phased out to allow quick bidding for the smaller contracts. The Project would also compromise the selection of a design, procurement and supervision consultant (US$15 million), Project management support, third-party-monitoring, road safety and other technical assistance. Annex 1 includes the summary of the Procurement Plan.

73. **A Concessionaire (private company) will be selected through an international competitive selection process to deliver the operation of the BRT system.** The Concessionaire will, under a Concession Agreement with SMTA, finance, procure, supply, maintain and operate bus services along the Yellow Corridor including supply and maintenance of the IITS and fare collection and manage the stations and the depots. The Project will provide a working capital subsidy defined upfront to all bidders to minimize the operating cost over the concession period (10-years), hence lower the required subsidy. The Project will support a PPP Transaction Advisor to structure the Concession agreement.

74. **SMTA is staffed with a Managing Director, various technical/operations Directors, and a procurement unit.** The current Director (Infrastructure) is well versed with procurement and worked on contract management. The Deputy Directors (Infrastructure) and other staff supporting procurement process will require training/guidance in managing the Bank-funded procurements. The SMTA will hire one procurement and contract management staff at the Project office. In addition to this, the SMTA will also rely on the design/construction supervision consultant to assist them in the day-to-day management of the Project.

C. Safeguards

Environmental Safeguards

75. **The proposed Project is expected to have an overall positive environmental impact provided**: (i) the expected modal shifts in passenger choice from private vehicular use to public buses take place, as a result of the Project, and (ii) the new planned buses use cleaner fuels and the old buses are scrapped, which together, will then lead to significant reduction of vehicular pollutant emissions into the air.

76. **The total gross Carbon Dioxide (CO_2) emissions over the 20-year evaluation period without the Project are estimated at 2.02 million tons.** In the with-Project scenario at 1.42 million tons, a net decrease of CO2 emissions of about 600,000 tons, or 30,000 tons per year.

77. **If managed properly, positive land use changes will occur along the corridor that could lead to more controlled and sustainable urban regeneration and development using a green growth approach.** These positive impacts are also likely to occur along the Red and Green corridors. As these are being planned/constructed contemporaneously with the Yellow corridor, cumulative impacts are likely along all three corridors with potentially overall positive multiplier effects for the city's residents.

78. **Construction activities in the short-term and land use changes along the corridor in the medium- to longer-term, if not carefully planned for and managed, may potentially lead to adverse environmental impacts.** Construction impacts will include noise, dust, road safety, temporary disruption to traffic patterns and OHS, vibration and local flooding mostly be temporary and can either be avoided or managed through readily available tangible mitigation measures.

79. **The proposed Project triggers Environmental Assessment OP4.01 and consistent with the environmental risks and potential impacts described, EA category B has been assigned to the Project.** Furthermore, to ensure these impacts are understood and can support the decision-making process and the engineering design phase, the SMTA prepared a comprehensive Environmental Impact Assessment, consistent with the requirements of the GoS and OP4.01, that qualitatively and quantitatively analyzed the potential

impacts and effects of the proposed Project and included a detailed EMP. The EIA and corresponding EMP were disclosed on SMTA's website on April 3, 2019 and were subjected to meaningful consultations in Karachi on 18 April 2019, with representatives of Project affected peoples, communities and other stakeholders.

80. **The SMTA have hired an Environmental Safeguards Specialist to help ensure the satisfactory environmental management of the Project.** This includes close supervision of the implementation the EMP during construction and operations and maintenance stages of the proposed Project.

Social Safeguards

81. **The proposed Project will primarily generate positive social impacts.** These include eased traffic flows and safety, reduced travel time, improved transportation for the poor, women and persons with disabilities, and additional jobs.

82. **However, some other potential adverse social impacts and risk have been identified**. A social impact assessment (SIA) has been carried out. In addition to the impacts on the vendors within the Right-of-Way (ROW), the following potential adverse social impacts and risks have been identified: (a) potential effects on the livelihood of existing public transportation providers, including bus operators and drivers; (b) potential effects on removal street parking spaces in certain sections; (c) social impacts on taxi drivers; and (d) changing citizens' social habit in using public transportation. The SIA includes details of these impacts and the proposed mitigation measures. Extensive consultations have been carried out with different stakeholders during the process of SIA.

83. **A detailed census survey will be carried out one year prior to the BRT operation.** The survey will identify affected bus operators (bus owners, drivers, conductors and route managers) whose livelihood will be affected due to the closure or rerouting of their bus routes to avoid competition with the BRT operations. A detailed mitigation plan will be developed based on the census survey of operators including incentives to join new system, leasing or buying existing licenses and buses, complementarity in operations and a labor redeployment services program will be offered to those who will lose their jobs.

84. **The Project will have limited impacts on involuntary resettlement.** The BRT system will be developed within the existing Right of Way (ROW) and will not involve new land acquisition, and the Project area has not been affected by the anti-encroachment drive. However, the Project will affect 120 persons who are currently doing businesses within the ROW. Project Affected Persons (PAPs) include informal vendors, skilled labors and plant nurseries owners and employees. To mitigate such adverse impacts, a CLRP has been prepared by following the World Bank's OP4.12 on Involuntary Resettlement and relevant laws and regulations in Pakistan. The CLRP includes the detailed census of the affected people, an inventory of affected assets, and socioeconomic surveys and extensive consultations with the PAPs. The CLRP provides details on procedures, requirements (and the associated budget) to be followed during Project implementation, including compensation, mitigation measures to restore incomes, institutional and monitoring arrangements. GoS will finance the CLRP and will be responsible for its implementation, monitoring and evaluation satisfactory to the Bank. GoS will ensure that the compensation and restoration of livelihood of affected persons will be done prior to the start of any contract, as noted in paragraph 11. The project area is not at risk of being affected by the AED. However, in the unforeseen event that the government needs to carry out AED activities under Supreme Court order, the Bank's Policy on Involuntary Resettlement will apply to determine compensation and

livelihood rehabilitation. SMTA will develop a working arrangement with the relevant GoS departments or agencies to ensure compliance with the Bank's policy.

85. **Extensive consultations were carried out with different stakeholders during the preparation of SIA and CLRP, and the Project will incorporate a robust Citizen's Engagement plan.** Focus group discussions were held at different points along the corridor with: residents (potential future Yellow BRT Corridor service users) of low and middle-income neighborhoods located within the corridor of impact; women, youth, and vulnerable groups including persons with disabilities; PAPs or vendors and hawkers who will be displaced or experience livelihood impacts due to construction of the BRT; NGOs; academics and researchers; and, concerned government departments and institutions. In addition, individual interviews with both men and women were conducted to identify and understand the needs and views of current users of public transport. In general, stakeholders were extremely supportive of the proposed BRT and stressed that the service will ease and enhance mobility (including for livelihood purposes), and be of significant benefit for women, students, and the elderly. Concerns were raised about construction related impacts including increased noise and pollution (due to dust), and temporary and/or permanent disruption of livelihood activities for PAPs, and current transport providers (owners, drivers, and bus conductors). The needs for better services on feeder routes; affordability and efficiency of service; separate compartments and enhanced security measures for women; availability of adequate parking facilities near stations; and, proper training programs for service providers to sensitize them to issues of Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA); were stressed. The details of the stakeholder consultations can be found in the SIA and CLRP. These documents were disclosed in-country (on the SMTA's website) on April 3, 2019. A formal stakeholder consultation session was carried out together with the EIA on April 18, 2019. The Project makes provision for engaging all stakeholders, especially affected people and communities, through the life of the Project. The Project will also incorporate feedback from stakeholders through a user satisfaction survey.

Grievance Redress Mechanisms

86. **The Project will include a GRM for registering and addressing complaints from different stakeholders and PAPs.** The GRM will be accessible, effective, and responsive for stakeholders and PAPs including women and vulnerable groups. The aim of the GRM is to reduce the risk of unaddressed complaints that can eventually lead to Project delays, and reduced support for the Bank's activities within the Project area and wider civil society. The proposed GRM will receive, review and resolve Project related grievances, and facilitate the proper implementation of the CLRP. It will be two-tiered; with one forum of redress at the field level to enable speedy resolution; and another forum at the Project Management Team level for complex cases that cannot be resolved locally. PAPs and other stakeholders will receive complete information regarding the GRM. The social safeguards officer at the Project Management Team will be responsible for the GRM and a proper gender-disaggregated record of complaints, including satisfaction with the resolution process, will be maintained.

87. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported Project may also submit complaints to the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address Project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how

to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/grs*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

D. Gender

88. **Lack of safe, affordable and accessible public transport system in Karachi affects all but particularly female riders.** Although the robust data on prevalence of sexual harassment in public space is not available for Karachi, harassment is reportedly widespread. The share of women who reported to have been sexually harassed in public transportation in Karachi ranges from 55 percent to 80 percent[17]. The perpetrators are mainly male passengers followed by conductors and drivers. Findings of consultations and interviews conducted with women service users, related government institutions and CSOs for the Project show that most women are dissatisfied with the current public transport service and complained about poor facilities; lack of adequate, clean, and safe seating on buses and waiting spaces at bus stops for women and, frequent experience of harassment both while waiting for buses and during travel. In consultations transgender persons also complained about constraints in accessing public buses and frequent harassment. In addition, women expressed an overwhelming need for transit transport that could pick them up from close to their homes and transport them to the BRT stops. Furthermore, using different modes increased their expenses on traveling: women reported spending roughly about 15 percent to 20 percent of their salaries on transportation.

89. **The BRT will create a more amenable mobility environment where accessibility, in particular of women**, **to jobs and services will be improved.** This is particularly important for Pakistan given that only 20.1 percent of females participate in the labor force as compared to 68 percent for males[18]. The Project will address the needs and concerns of women and various vulnerable groups (e.g. elderly, persons with disability, transgender, children etc.) to increase their ridership by: enhancing safety and security features on the Yellow corridor to mitigate GBV risks through training of bus drivers and other staff on the expected conduct; improving security system (e.g. CCTV cameras at stations and buses, well-lit stations, security personnel), and creating reliable channels of a complaints and feedback mechanism; running an awareness campaign against sexual harassment and GBV; and, adopting infrastructure design features that address the needs of female users and vulnerable groups (e.g. safe, clean and comfortable stations/stops; buses that can be accessed; separate space for women on buses; safe pedestrian crossings; separate toilets etc.), providing transit facilities (e.g. buses or shuttles that can go inside the crowded settlements and transport women and men to the main alignment in the Yellow corridor).

90. **The Project will increase women employment in both SMTA and the PMT.** The share of female engineers registered in professional networks ranges from 5 to 10 percent[19]. SMTA is largely male-dominated, with women constituting about 10 percent of its professional workforce. Lack of gender-sensitive transport services and lack of women in the sector often reinforce each other. The latter often contributes to women's

[17] https://genderinsite.net/sites/default/files/safe-public-transport-women-girls.pdf; An empirical review of Karachi's Transportation Predicaments: from Personal Attitudes to Public Opinion – a mega city survey – Syeda Hoorul Ain, University of Karachi, 2016

[18] 2017-18 Refined Labor force Participation rates (currently active population 10 years and older). Pakistan Bureau of Statistics, Labor Force Survey 2017-18
http://www.pbs.gov.pk/sites/default/files//Labour%20Force/publications/lfs2017_18/Annual%20Report%20of%20LFS%202017-18.pdf

[19] Professional Network of Women Engineers Pakistan; Pakistan Engineering Council (PEC)

voices as transport users not being heard. Focus on women's employment in the sector can help SMTA Project a progressive image that is more representative of their customer base, may affect riders' perceptions of transport safety and actual incidence of sexual harassment in public. SMTA will hire 30 percent women in its upcoming recruitment batch, with the aim of reaching 50 percent women in the PMT. This will be complemented with provision of women friendly amenities (separate toilets, safe transport options, day care center, if required). This will be accomplished by establishing the links with higher education institutions to create a 'school to employment' transition link for female graduates. Furthermore, the Project will support women to start their businesses along the corridor. The Project anticipates positive impact on transportation service for women, with the percentage of women using BRT reaching 30 percent. SMTA will recruit a Gender specialist to implement GBV/Gender Action Plan, to ensure that all necessary steps are taken to address potential GBV risks and to enhance women's mobility and employment opportunities through the Project.

91. **The Project will employ women during its operation phase.** Currently the share of women employed in the transport, storage and communication[20] sector is almost nonexistent: only 2.5 percent of women are employed in this sector. The Concessionaire (private sector) that will be selected for the operation and maintenance of the BRT system will be required to include 20% women in the staffing plan, this measure will not only increase women participation in the workforce but will also make the BRT service gender-responsive, as expressed during the gender assessment consultations, and therefore will increase women ridership.

92. **Projects involving civil works can increase the risk of GBV and SEA**. GBV continues to be one of the most significant human development challenges in Pakistan. According to the 2017-18 Pakistan Demographic and Health Survey (PDHS), 15 percent of the surveyed females age 15-49 experienced physical violence and 4 percent sexual violence in Sindh. 39 percent of the survivors sought help to stop violence in urban Sindh. In most cases women approach their families but very few of them go to police or a social worker. Lack of help-seeking behavior can be a barrier to accessing health care for women and their children and for seeking justice and can result in underreporting of potential Project-related SEA cases. There are two shelter homes operating for GBV survivors in Karachi, located at a distance of 30 minutes to an hour from the Yellow BRT corridor. There is only one women's police station in Karachi located in Saddar (Central Business District area). There are several helplines in Karachi providing services of varying quality and degree to GBV survivors. Overall, the mapping service provider revealed insufficient providers for such a megacity, some of which fall short of quality service, which necessitates adequate mitigation measures by the Project Implementing Agency.

93. **To address potential risks of GBV/SEA that can emerge in Projects involving civil works, the Project will incorporate the recommendations of the Bank's Good Practice Note "Addressing Gender-Based Violence in Investment Project Financing involving Major Civil Works"[21].** According to the Bank's GBV risk assessment, the Project is considered 'moderate' risk for GBV. The Project will develop a GBV Action plan that outlines how the Project will put in place necessary protocols and mechanisms to address the GBV risks, such as, sensitizing the IA on the importance of addressing the GBV in the Project; undertaking GBV-sensitive consultations with the Project-affected communities; enhancing the Project Grievance Redress Mechanism (GRM) to integrate specific procedures for GBV; making existing GBV helpline/s more active in Karachi and continuously monitoring GBV service providers to check their capacity and coverage; and strengthening contractor obligations to address GBV risks.

[20] Labor Force Survey 2017-18, Pakistan Bureau of Statistics
[21] World Bank. 2018. http://pubdocs.worldbank.org/en/399881538336159607/Good-Practice-Note-Addressing-Gender-Based-Violence.pdf

V. KEY RISKS

94. **The overall risk rating for the Project is Substantial.** This is driven by high political and governance risks, as well as an array of Substantial risks related to the Macroeconomy, Institutional Capacity, Fiduciary issues, Environmental and Social risks, and Stakeholder risks, described in greater detail below alongside proposed mitigation measures.

95. The risks of the Project, and possible mitigation measures may be summarized as follows:

(a) **Political and Governance Risks (High):** The Political and Governance risks are rated high. The main reason for nonexistent public transport in Karachi can be attributed to governance related issues e.g. overlapping mandates of agencies, centralization, fragmentation, etc. Currently different political parties head the Federal, Provincial and Municipal governments. The risk of political disagreements affecting Project implementation is high. This risk will be mitigated by ensuring effective coordination between all stakeholders and ensuring the SMTA Board meets regularly.

(b) **Macroeconomic Risks (Substantial):** These risks mostly stem from the recent deterioration in the macro-fiscal situation in Pakistan. The early effects are being felt through continued depreciation of the currency and hike in energy tariffs. This in the medium term will increase inflationary impacts and reduce spending power that can impact domestic demand. This will be mitigated through the economic reform program recently negotiated with the IMF. The fiscal impact will lead to delayed release of capital and recurrent budgets for project implementation and this will be mitigated by ensuring that the province prioritizes project expenditures in its annual budget and development plans. Furthermore, the Project is expected to start major disbursements in FY22, by that time the macroeconomic condition is expected to improve.

(c) **Institutional capacity for Implementation and Sustainability Risks (Substantial)**: The Project will be implemented by SMTA, which is still in the process of developing its capacity to implement large infrastructure Projects. The Project will support several mitigation measures including the procurement of professional consultancy firms to support Project design, construction and contract management, and in the training of SMTA staff.

(d) **Fiduciary Risks (Substantial):** Fiduciary risks are substantial as SMTA is still developing the capacity to implement large contracts, both internally and externally financed. SMTA has adequate Financial Management systems in place, fulfilling international financial reporting requirements, however Procurement capacity is considered inadequate. Specific mitigation measures have been proposed by the financial management and procurement assessment.

(e) **Environmental and Social Risks (Substantial)**: Environment and Social Risks are substantial given the planned infrastructure works on the corridor. The Project area is not at risk of being affected by the AED, however in the unforeseen event that the government needs to carry out AED activities under the Supreme Court order, the Bank's policy on Involuntarily Resettlement will apply to determine compensation and livelihood rehabilitation. Environment related risks will not pose any long-term challenges as these are mostly confined to the construction phase. These will be mitigated through adoption of sound technical methods and procedures (dust and noise suppression during construction, and compliance with the Bank's OHS Guidelines). As the Project does not envisage any land acquisition, hence the social risks primarily will be associated with short- and long-term livelihood loss of Project affected people. Shop owners, roadside vendors, and other businesses along the corridor will face

some disruption during construction. These risks will be mitigated by providing compensation for loss of income. For existing bus operators and owners, the Project will not only compensate for job loss, but will also provide labor retraining and redeployment services. SMTA has advertised positions for environment, gender, social safeguards, and communications experts as permanent staff. The Project will help build capacity in SMTA by providing specific trainings. The Gender Based Violence risk of the Project has been assessed as moderate.

(f) **Stakeholders Risks (Substantial):** Several stakeholders are actively engaged in Karachi's public transport sphere. These include public sector entities (Transport and Mass Transit Department of the Government of Sindh, SMTA, KMC, DMCs, KDA, RTA, Traffic Police), Federal Government entities (Planning Commission, SIDCL), NGOs (Shehri, Heritage Foundation etc.), and business, trade and commerce Associations (KCCI, KATI). The risk associated with large and varied group of stakeholders is the possibility of undue interference, exerting influence or directly or indirectly creating work disruptions. The Project realizes that the best mitigation will be a transparent and effective communication with all stakeholders. The Project has already held number of stakeholder engagements during preparation, and will finance a sustained, professional communications and outreach program. This will be supplemented by the overall communication program for the WB's Karachi Platform.

VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Pakistan

Karachi Mobility Project

Project Development Objectives(s)

The Project Development Objective is to improve mobility, accessibility and safety along selected corridors in Karachi.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
Improve Urban Mobility			
Daily Number of Public Transport Trips on the Bus Rapid Transit System (Number)		0.00	300,000.00
Female ridership (Percentage)		10.00	30.00
Car travel time during peak hour along the Yellow Corridor (Minutes)		71.00	54.00
Improve Urban Accessibility			
Modified Urban Accessibility Index (Percentage)		5.20	15.10
Improve Urban Traffic Safety			
Annual Number of Traffic Fatalities along the Yellow Corridor (Number)		100.00	50.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
Urban Road Infrastructure- Yellow Corridor			
Roads rehablitated (CRI, Kilometers)		0.00	21.00
Roads rehabilitated - non-rural (CRI, Kilometers)		0.00	21.00
Roads rehabilitated - rural (CRI, Kilometers)		0.00	0.00
Development and Operationalization of a BRT System			
Length of BRT Corridor (Kilometers)		0.00	21.00
Number of BRT Stations (Number)		0.00	28.00
BRT users satisfaction (Percentage)		0.00	80.00
Female staff employed during BRT Operation (Percentage)		0.00	20.00
Capacity Buidling and Technical Assistance			
Number of new Professional Staff recruited by SMTA on merit-basis (Number)		0.00	15.00
of which female (Percentage)		0.00	30.00
Completion and adoption of the strategy to consolidate and improve the management of the urban transport sector in Karachi (Yes/No)		No	Yes
Completion of the Corridor Developemt Strategy focusing on Transit-Oriented Development (Yes/No)		No	Yes

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Daily Number of Public Transport Trips on the Bus Rapid Transit System	Daily ridership on the BRT system along the yellow corridor on various type of services (trunk, feeder or direct).	Monthly after start of BRT operation.	Private BRT Operator.	Fare collection system.	SMTA.
Female ridership	The baseline of the female ridership percentage is for the existing buses, hence it is 10% and not 0%, as opposed to the target which is for the BRT buses only.	Monthly after start of BRT operation.	Third Party Monitoring.	Stations and on-board surveys.	The PMT.
Car travel time during peak hour along the Yellow Corridor	Car travel time end-to-end along the yellow corridor (21 km) during peak hour which is in the afternoon around 6:00 pm.	Once every 6 months after completion of all civil works along the Corridor.	Third-Party Monitoring Consultant.	Regular passenger car traveling end to end at or below speed limit during afternoon peak hour on a Tuesday, Wednesday or a Thursday.	SMTA through the Third-Party Monitoring Consultant.
Modified Urban Accessibility Index	% of work trips within the Yellow Corridor catchment area that take 60 minutes or less to complete by a public transport system as primary mode of travel, out of all work trips in Karachi.	Twice a year.	GTFS and trip surveys will be done based on the catchment area of the BRT services.	A firm will be hired to conduct this survey.	SMTA will hire the firm under the project.

Annual Number of Traffic Fatalities along the Yellow Corridor	Number of traffic fatalities along the Yellow BRT Corridor.	Annual.	Traffic Police.	Police records.	The PMT.

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Roads rehablitated		Quarterly construction start	The Supervision Consultant	Civil works completed and certified by the Supervision Consultant	The PMT
Roads rehabilitated - non-rural		//	//	//	//
Roads rehabilitated - rural		N/A	N/A	N/A	N/A
Length of BRT Corridor	number of kilometers of the BRT corridor defined as the segregated busway in the middle of the road.	Quarterly after start of civil works.	The Supervision Consultant.	Civil works completed abd certified by the Supervision Consultant.	The PMT.
Number of BRT Stations	Number of BRT Stations.	Quarterly after start of civil works.	The Supervision Consultant.	Civil works completed and certified by the Supervision Consultant.	The PMT.
BRT users satisfaction	Percentage of BRT users that are satisfied with the quality of the BRR service.	Once, 6 month-one year after the start of	Third Party Monitoring Consultant.	Randomized User Satisfaction Survey.	The PMT.

		the BRT operations.			
Female staff employed during BRT Operation	Percentage of female staff employed by the BRT operator (Private Concessionaire).	Every 6 months after start of BRT operation.	Private companies data.	TransKarachi will collect from the private companies.	The PMT.
Number of new Professional Staff recruited by SMTA on merit-basis	Number of staff recruited by SMTA following TORs agreed with the World Bank.	Once at the end of October 2019.	SMTA HR.	HR records.	SMTA.
of which female					
Completion and adoption of the strategy to consolidate and improve the management of the urban transport sector in Karachi	Strategy to consolidate the management of the transport sector in Karachi.	Once at the end of 2020.	The PMT.	Completed study.	The PMT.
Completion of the Corridor Developemt Strategy focusing on Transit-Oriented Development	A strategy to develop the Corridor after BRT completion.	Once.	The PMT.	Completed study.	The PMT.

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Pakistan
Karachi Mobility Project

IMPLEMENTATION ARRANGEMENTS

1. **The Project oversight will be the responsibility of the SMTA Board.** A separate Project Steering Committee is not envisaged as all concerned stakeholders are already part of the SMTA Board. SMTA and Sindh Transport and Mass Transit department will ensure meetings of SMTA Board are held regularly i.e. at least once a month for the first year of Project implementation.

2. **The Project does not envisage a separate standalone Project implementation unit.** An internal Project management team comprising of existing staff will be notified by SMTA and will be supported by management and technical consultants as necessary. The rationale behind this arrangement is to use this Project as a vehicle to build SMTA's capacity, something that will not be possible with a Project Implementation Unit that staffed primarily with individual consultants.

3. **The Project Director (PD) will be overall responsible for the Project implementation and will report to the managing director SMTA.** The PD's responsibilities cover all aspects of Project implementation, including technical, operational, procurement, financial management, disbursement, overseeing the technical assistance, training, public awareness and communication activities, and implementation of the CLRP, Gender Action Plan, and the GBV mitigation plan, cross-agency coordination, including grievance redress. The Design/Supervision Consultant will be the designated "Engineer" for the Project. The Engineer will also monitor the implementation of contractual clauses/conditions during construction.

4. **The operation and maintenance management function may be delegated by SMTA to TransKarachi**, a Public Company that was formed under the Red Corridor Project with funding from ADB over 3-year period. The Bank will coordinate with ADB for capacity building and institutional strengthening of all institutions. After four years, the BRT system may have other sources of financing which will then sustain the cost of both the Infrastructure Construction Company as well as TransKarachi so they don't rely on financing from multilateral development banks.

5. **Component III involves various Technical Assistance activities.** Multiple stakeholders are involved in this component, including RTA, KDA, KMC, Traffic Police and Health Department. SMTA will take the lead in coordinating Component-III activities with the other entities.

CAPACITY BUILDING OF SMTA

6. **GoS approved the establishment of the Sindh Mass Transit Cell (SMTC) as an interim arrangement to start work on mass transit systems in Karachi**. The SMTC initially hired a Director General to head SMTC, who was supported by Director (Infrastructure), Director (Bus Operations & ITS), and Director (Finance/Administration). Subsequently another 34 officers and support staff were hired in SMTC to help in undertaking the various schemes in Sindh Government's plans. All of these 38 SMTC staff (18 officers, and 20

support staff) were absorbed in SMTA after its formal notification in 2017, along with change of title of Director General to Managing Director. The current staffing strength of SMTA has remained mostly unchanged at around 35 personnel. The current staffing strength of SMTA is presented in Table 1.

Table 1. SMTA Staffing

Designation	Approved	Existing
Officers	69	19
Support Staff	101	16
Total	**170**	**35**

7. **No attention has been given to building capacity in SMTA since its formation.** No serious attempt was made to fill the staffing vacancies and drafting of rules and regulations have taken considerable time. Currently no staffing rules and regulations of any kind exists, including staff hiring procedures and salary scales. All existing staff are on contract and receive market-based salaries. SMTA is in the process of developing the Authority's rules and regulations through an ADB financed TA.

8. **SMTA receives funding from Sindh Government in the form of annual "Aid in Grant".** This is used for all recurrent expenditures. Development funds are received through the provincial Annual Development Program (ADP). Budget planning starts around March of each year and is then submitted to the Government for approval. As per SMTA Act, the SMTA Board has to approve the budget before it is submitted to the Government for final approval. However, both FY18 and FY19 budgets were submitted directly to the Government, as SMTA Board meetings were not held regularly.

9. **SMTA has been assigned the responsibility of the implementation of several Projects, the biggest being the construction of the Orange BRT Corridor.** SMTA was also responsible for the selection of Bus Operator, Command and Control Center, and IITS for the Green Corridor prior to handing over this task to SIDCL. The completion of the Orange Corridor has been considerably delayed.

10. **SMTA is not operating as an independent autonomous agency as per its mandate**; it is run as an attached department within Transport & Mass Transit Department. The following measures will be adopted to ensure SMTA's effective and efficient implementation of the Project:

(i) HR policies and procedures should be finalized at the earliest. The HR policy should clearly define the procedures and requirements to ensure right person for the right job policy is adhered to. SMTA will setup an online application system, and to ensure transparency and avoid any potential interference, the evaluation of applications will be outsourced to either a certified testing agency (National Testing Services), or to a reputable University (IBA or NED University).
(ii) In addition to the four positions already advertised (Gender, Environment, Communications and Company Secretary), SMTA will commence hiring of other essential staff immediately. The hiring will be through a competitive process, and evaluation and selection will be conducted through an independent third party.
(iii) SMTA will hire the services of a Project Management firm with experience in BRT implementation to help build Project management capacity. SMTA will also draw up a multi-year training/capacity building program, to be agreed to with the World Bank prior to implementation.

PROCUREMENT MANAGEMENT

11. The Bank's contribution of US$382 million is allocated to procurement of works, goods, non-consulting services, consultancies, and IT equipment. The procurement plan is summarized in Table 2 below. The major contracts to be procured under the Project would consist of:

(i) Civil Works of varying nature including two large works contracts. The cost for the total development of Yellow BRT Corridor is estimated at US$281 million;
(ii) Consultancies of varying nature including a large consultancy for the construction supervision of all civil works contracts estimated at US$15 million;
(iii) There will be several small procurement packages for Goods, Consulting and non-consultancy services for Project management and capacity building and technical assistance;
(iv) Concession agreement for the operation of BRT services along the Corridor;

Table 2.Summary of the Procurement Plan

SN	Contract title	Estimated cost and risk rating	Bank oversight	Procurement approach	Selection method	Evaluation method
1	Package 1: Construction of Depot # 1 (near Dawood Chowrangi)	US$7.8 million / Substantial	Post Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
2	Package 2: Construction of Depot # 1 (near Indus Hospital)	US$12.3 million / Substantial	Prior Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
3	Package 3: Construction of road and BRT facilities along the Yellow BRT Corridor – Road Works (segments 0,1,2)	US$175 million / Substantial	Prior Review	ICB, Single Stage Two Envelop System	RFB (Post Qualification)	Lowest Evaluated Cost
4	Package 4: 1 km long bridge (segment 3)	US$24 million / Substantial	Prior Review	ICB, Single Stage Two Envelop System	RFB (Post Qualification)	Lowest Evaluated Cost
5	Package 5: Construction of road and BRT facilities along the Yellow BRT Corridor – Road Works (segments 4,5,6,7)	US$50 million / Substantial	Prior Review	ICB, Single Stage Two Envelop System	RFB (Post Qualification)	Lowest Evaluated Cost
6	Procurement Support and Construction Supervision of Yellow Corridor (Road & BRT Works) - Consultancy	US$15 million / Substantial	Prior Review	QCBS - Firm Selection	QCBS (International)	Highest ranked

SN	Contract title	Estimated cost and risk rating	Bank oversight	Procurement approach	Selection method	Evaluation method
7	Off-corridor Improvements works - Package 1	US$3 million / Moderate	Post Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
8	Off-corridor Improvements works - Package 2	US$3 million / Moderate	Post Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
9	Off-corridor Improvements works - Package 3	US$3 million / Moderate	Post Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
10	Off-corridor Improvements works - Package 4	US$3 million / Moderate	Post Review	NCB, Single Stage two envelop	RFB (Post Qualification)	Lowest Evaluated Cost
11	GBV Service Provider - Preventing and Mitigating Gender Based Violence (GBV) - Consultancy	US$0.5 million / Moderate	Post Review	QCBS - Firm Selection	QCBS (National)	Highest ranked
12	Procurement of Office Furniture, Project Vehicles & IT Equipment - Goods	US$0.5 million / Low	Post Review	There will be several small packages attracting Shopping, NCB and Direct procurement for vehicles.	RFB / Shopping / Direct	Lowest Evaluated Cost
Total		US$297 million				

12. **A specific Project Management Team (PMT) within SMTA consisting of appropriate experts headed by a PD will have the overall responsibility for implementing the Project.** The PMT is being staffed and the composition is: a Project director, a deputy Project director, liaison officer, civil engineers, a mass transit specialist, a traffic engineer, a financial management specialist, a full-time fully accredited accountant, a procurement & contract management specialist, an environmental specialist, a social development specialist, a resettlement specialist, and a communication specialist. In parallel, three sets of consultants - Project Supervision and Contract Management Consultant, Monitoring and Evaluation Consultants will also support the PMT. It would be essential to engage/recruit a qualified Procurement Specialist at PMT to manage the Project procurements and the contract managements.

13. **SMTA will ensure that there is adequate capacity installed at PMT to effectively manage the contracts especially for the large infrastructure contracts.** In addition to deploying qualified staff, either inhouse or through the consultancy contracts, SMTA will develop its own Procurement and Contract Management Information System (PCMIS). The large infrastructure contract performances would be monitored through Primavera/MS Project or equivalent.

14. **In the province as well as in SMTA, procurements are carried out using the Sindh Public Procurement Rules 2010.** However, the Project will follow the *Bank's Procurement Regulations for Borrowers for Goods, Works,*

Non-Consulting and Consulting Services dated July 1, 2016 for carrying all procurements to be financed under the Project.

15. **The SMTA will use the STEP tool for all procurements for which the World Bank will provide essential training to the nominated staff from SMTA/PMT.** The Project will only finance those contracts/activities which are approved through STEP.

16. **SMTA has a track record of contracting and managing consultancies and works using the Sindh Public Procurement Rules.** The size of procurements so far undertaken by SMTA are much smaller than those anticipated under the KMP. The SMTA will need to learn the procurement process and the requirements under the World Bank Procurement Regulations. Accordingly, an additional staff for procurement and contract management will be hired at the PMT who will report to the PD of PMT.

17. **The supervision consulting firm will also support in procurement and contract management of the works contracts.** For the Project procurements, approvals will be delegated to the PD. A Project operational manual is being developed, which will include composition of the evaluation committees, roles and responsibilities of various staff for the procurement function, service standards, approving authority, contract signing and management responsibility for the contracts to be awarded under the Project. The evaluation committees' recommendation will be approved by the PD before award. Relevant PMT staff will be provided training in the procurement and contract management function under the Bank procurement procedures.

FINANCIAL MANAGEMENT

18. **SMTA with headquarters in works in coordination with the relevant federal, provincial and local government entities.** The PMT shall be responsible for the execution and implementation of the Project including management and reporting on the fiduciary aspects: financial management, disbursements, audits and procurement among other related matters. A review of financial management arrangements in SMTA was carried out and key findings are provided below:

Risk Assessment matrix

Table 3. Financial Management Risk Assessment

Type of Risk	Preliminary Risk Rating	Brief Explanation	Risk mitigating measures incorporated in Project design	Residual Risk Rating
Inherent Risk				
Entity Level - SMTA	Substantial	The entity has experience of implementing similar Projects.		Substantial
PMT Level	Substantial	A full-time dedicated FM specialist is not available for the PMT to execute the Project activities	FM staff to be deployed	Moderate
Overall Inherent Risk	Substantial			Moderate
Control Risks				
Budgeting	Substantial	As per SMTA act, the SMTA Board must approve the budget	SMTA to plan for the Project activities and include these in	Moderate

Type of Risk	Preliminary Risk Rating	Brief Explanation	Risk mitigating measures incorporated in Project design	Residual Risk Rating
		before it is submitted to the Government for final approval. However, both FY18 and FY19 budgets were submitted directly to the Government, as SMTA Board meetings were not held regularly	the PCI which should be prepared before the Project commencement. Ensure regular board meeting for timely review and approval of the annual budgets	
Accounting	Substantial	*Budget & Accounts Section* is currently well staffed. However, a dedicated qualified official shall be deputed in the Project office. Government approved NAM and Chart of Accounts shall be adopted for Project reporting	FABS terminal will be installed at the PMT. Bank statement by NBP to the Project by end of first week of succeeding month. Un-reconciled items to be resolved within a month.	Moderate
Internal audit (including Internal Controls)	Moderate	SMTA has established an internal audit function.	Internal Audit Unit of SMTA shall also cater for the internal audit function of the Project.	Moderate
Funds Flow	High	According to the SMTA act, a fund is created to support operation of the entity in which all receipts including foreign loans are deposited. The Project on the contrary shall require a separate assignment account.	Report-based disbursement including proper cash forecasts. Close liaison between PMT and FD to adapt the release policy to match the Project cash forecasts and this will be included as a Covenant for the Project.	Substantial
Financial Reporting	Moderate	The Government's accounting system is followed using the New Accounting Model (NAM) developed under PIFRA. The Chart of Accounts is flexible enough to report Project expenditure.	Monthly Budget Execution Reports (BERs) aligned with IUFR directly derived from FABS. IUFR shall be submitted within 45 days of the completion of semester (six months).	Low
External Auditing	Substantial	AGP can submit the required audit reports within 6 months of year-end.	AGP will include the Project as part of its annual audit plan. The FM team will continue to provide support to the AGP to improve the timeliness and quality of audit reports.	Moderate
Overall Control Risk	Substantial			
Overall Risk	Substantial The overall risk exposure is considered Substantial for this Project. This will be mitigated by implementing and adhering to the proposed risk management measures. An evaluation will be undertaken after six months to ascertain if consistent application the mitigation measures have reduced the risk.			

Disbursement and Funds Flow Arrangements:

19. **One Designated Account (DA) in USD will be established by the PMT with the National Bank of Pakistan to receive funds from the World Bank against the IBRD Loan.** Signatories to the DA will be the PD and the Project Finance Manager. Delegated alternate signatories will be documented in the Project operations manual. The funds under the Project will be disbursed and utilized by the PMT following the procedure for operating of designated account/ revolving fund account that has been revised by the Finance Division of the Ministry of Finance, Government of Pakistan (GoP) for foreign funded Projects vide notification dated August 2, 2013.

20. **The Bank's disbursements to the Project will be report-based, i.e. based on the interim financial reports (IFRs).** Initial advances to the DA may be front-loaded based on the forecast of the first two quarters' expenditures expected to be paid out of the funds in the DA as provided in IFRs. The DA will be subsequently replenished on a quarterly basis on the basis of actual expenditures incurred and forecast for the following two quarters. For withdrawal outside the designated account (i.e. applications for direct payment or for issuance of special commitments, or reimbursement), a minimum application value of US$100,000 will be observed. Supporting documentation required for documenting expenditures paid from the DA and for reimbursement will be based on IFRs. The frequency for documenting expenditures paid from the DA's will be quarterly. Direct Payments will be documented by records, such as copies of receipts or supplier's invoices, etc. Further details will be stated in the Disbursement and Financial Information Letter (DFIL). Disbursements from IBRD will be made against the expenditures incurred under respective Project components. The Bank financing for the Project will be at 100 percent, inclusive of taxes.

FM action plan:

21. The Project Director will ensure the implementation of the action plan below.

Table 4. FM Action Plan

Significant weaknesses	Action	Responsible Person	Completion Date
1. Lack of professional staff in the Budget and Accounts Section	Hire a suitably qualified and experienced staff familiar with the World Bank disbursement, financial management and procurement procedures as Finance Manager.	Project Director	Within one month of Project effectiveness
2. Need for timely disbursement of funds	Project cash forecast will be closely monitored and actively followed up with Finance Department of Sindh for timely release of funds. A separate assignment account shall be established for the Project	Project Director	Assignment Account should be opened within one month of the Project effectiveness

IMPLEMENTATION SUPPORT PLAN AND RESOURCE REQUIREMENTS

22. **The Project's Implementation Support Plan has been developed keeping in view the risks associated with the Project.** The plan aims to enhance the quality of the client's delivery of Project activities and address and mitigate critical issues and risks which may affect implementation or achievement of Project objectives. It will focus on: (a) strengthening technical and fiduciary capacity of SMTA; and (b) regular provision of implementation support through Bank missions and on-demand/concurrent support covering technical, institutional, safeguards, fiduciary and other aspects.

23. **The PMT will receive implementation support by a Project Management Firm to be funded by the Project.** The World Bank will conduct semi-annual formal implementation support missions, as well as frequent technical missions during the first two years of implementation. The core team of the World Bank for this Project is based in Islamabad and will provide ongoing implementation support.

24. **Proposed supervision mechanisms include**:

    (i) **Field Supervision Missions.** Regular supervision missions shall be conducted in Karachi by the World Bank. Participants shall include the Bank's task team, SMTA officials, Project managers of the civil works contractors, Resident Engineer of the Construction Supervision Consultant etc.
    (ii) **Third Party Monitoring.** For cross verification and validation, a third-party monitoring consultant will be hired for an independent assessment, covering environmental and social aspects including GBV- and SEA-related issues.
    (iii) **Reporting**: Reporting on SEA- and GBV-related issues by the third-party monitor agent, as well as all other reports by the Supervision Consultant on technical, fiduciary, environmental, and social matters will be communicated to the Bank through the PMT.
    (iv) **Incident checking**: During site visits, the Bank team will check incident reporting and complaint management to ensure that review processes are in place to document and report incidents.
    (v) **Project M&E System**. Progress in achieving the Project's objectives against the performance indicators will be measured through a comprehensive M&E system.
    (vi) **Financing for the Supervision**. Enough resources for supervision will be committed for the full six years and a half.

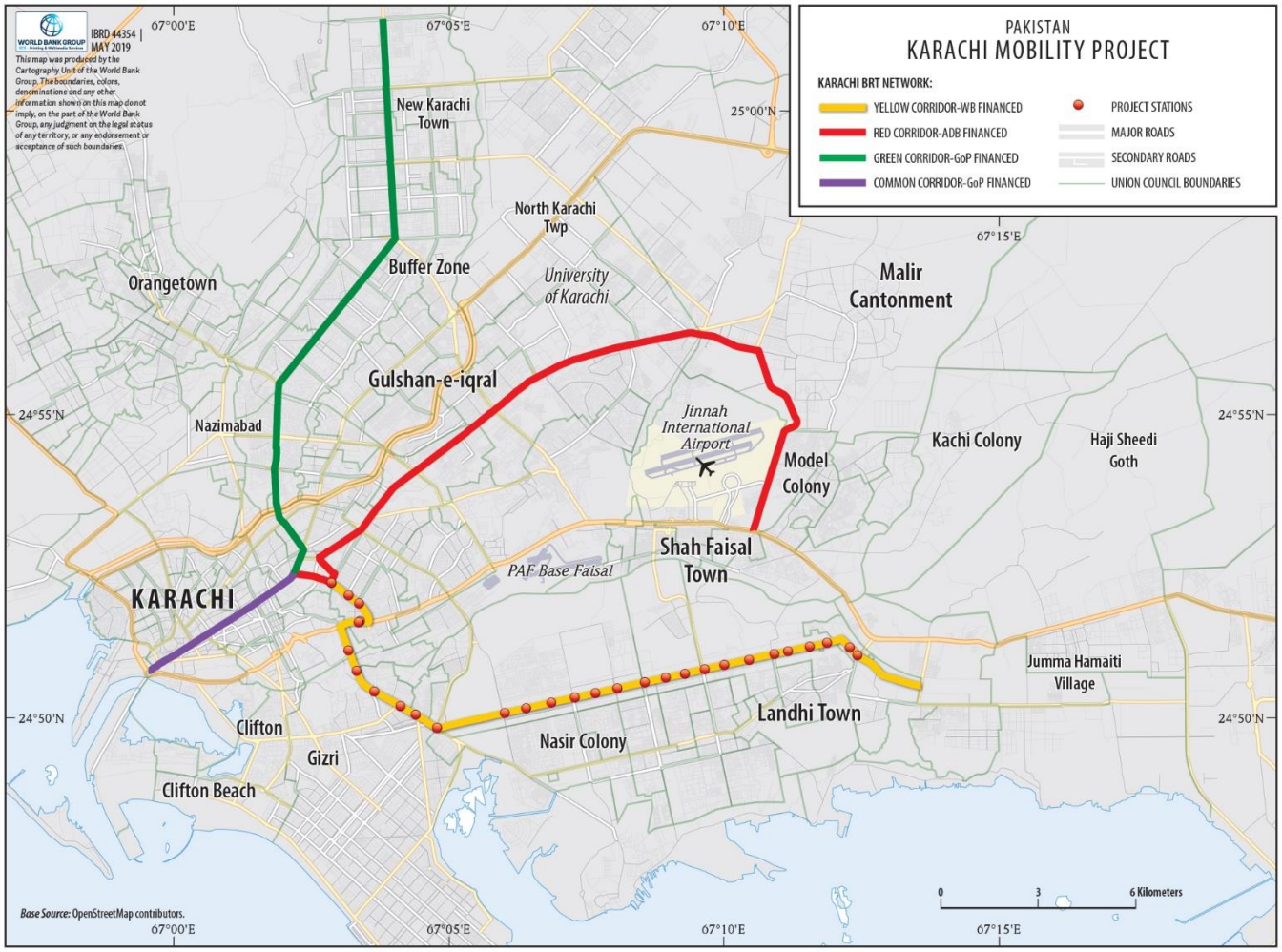
Table 5. Proposed Supervision Resources

Time	Focus	Skills Needed	Estimate
FY 18 & 19	Preparation	Project Design	US$420,000
Six Years and a half	Supervision	Implementation	US$1,500,000

ANNEX 2: Project Maps

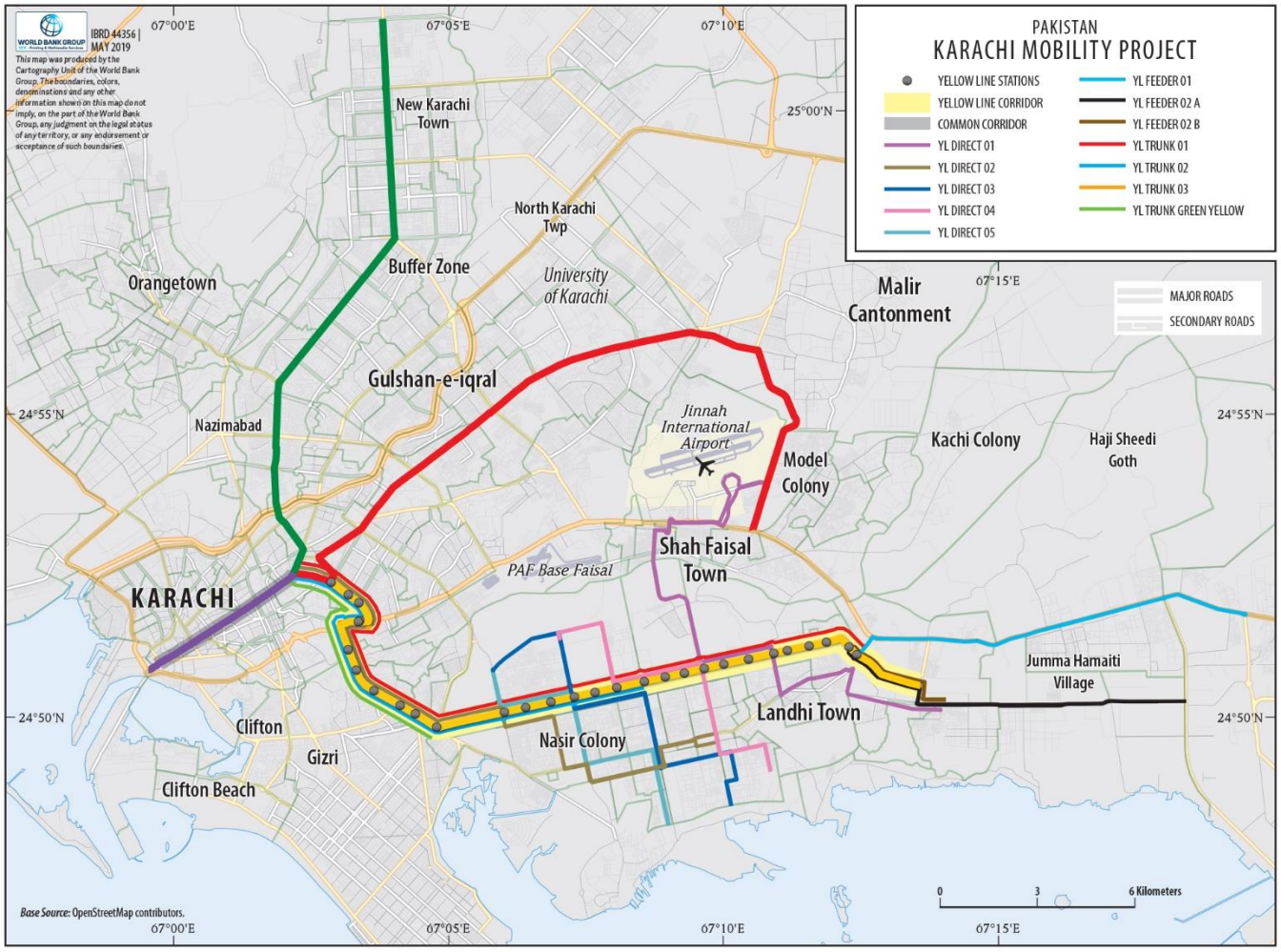
COUNTRY: Pakistan
Karachi Mobility Project

Karachi BRT Network



COUNTRY: Pakistan
Karachi Mobility Project

Yellow Corridor Alignment and Service Plan



COUNTRY: Pakistan
Karachi Mobility Project

Jobs in the Yellow Corridor Catchment Area