

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





**GOVERNMENT OF SINDH
TRANSPORT AND MASS TRANSIT DEPARTMENT**

**PRESENTATION
ON
MASS TRANSIT PROJECTS IN KARACHI**

December, 2018

VISION

- To Provide Safe, Reliable, Comfortable and Affordable Means Of Transportation
- Creating Enabling Environment for Private Investment
- Proper Regulation of Public Transport Through Implementation of Motor Vehicle Laws.
- To create new avenues for improvement of Transport facilities for the commuters in shape of Mass Transit Systems (BRTs and MRT)



POPULATION & TRANSPORT INDICATORS

INTRODUCTION

[SINDH AT A GLANCE]

Geographical Area	140,914 sq. km
Districts	29
Taluka	105
Union Councils	1,118
Katchi Abadis	1,409
Villages	36,556
Regularized Villages	11,872
Population as per 1998 Census	30.4 million
Population as per Provisional Census, 2017*	47.8 million
Average Annual Growth Rate as per Census, 2017*	2.80 %

* Source: Pakistan Bureau of Statistics (Census, 2017, Sindh, Table 1)

INTRODUCTION

Sindh

- Sindh is the second largest province of Pakistan in terms of population.
- Sub-optimal performance of local transporters in rural areas.
- Improper bus service and lack of support/ancillary facilities.
- Estimated total number of buses operating in the province is 1000 (except Karachi), out of which 45% are outdated.
- Lack of proper transport mechanism for commuters.
- Charging of exorbitant fares during the time of Religious festivals.

GOVERNMENT'S STRATEGY FOR SINDH (EXCEPT KARACHI)

FOREIGN FUNDED PROJECTS

- TRANSPORT MODELING AND FEASIBILITY STUDY FOR MASS TRANSIT SYSTEM IN HYDERABAD - approved by the PDWP. The funding of the project is purely a Grant from the Japanese Government. Now it will be place before CDWP for clearance.
- TRANSPORT MODELING AND FEASIBILITY STUDY FOR MASS TRANSIT SYSTEM IN SUKKUR - approved by the PDWP. The funding of the project is purely a Grant from the Japanese Government. Now it will be place before CDWP for clearance.

INTRODUCTION

Karachi

- Registered Vehicles in Karachi 4.77 Million
- Currently 6,457 buses of various sizes on 192 routes as against the requirement of 10,600 buses
- 2,715 contract carriage (Buses / Coaches)
- 85% (i.e. 5,400 buses) are more than 20 years old
 - Poor quality of service, high fuel consumption
 - Approximately 7,619 private vehicles and 24,197 Motorcycles are being registered* monthly:
 - Leading to more traffic congestion
 - Causes more pollution
 - Increase traffic density
 - Increase vehicle operating cost

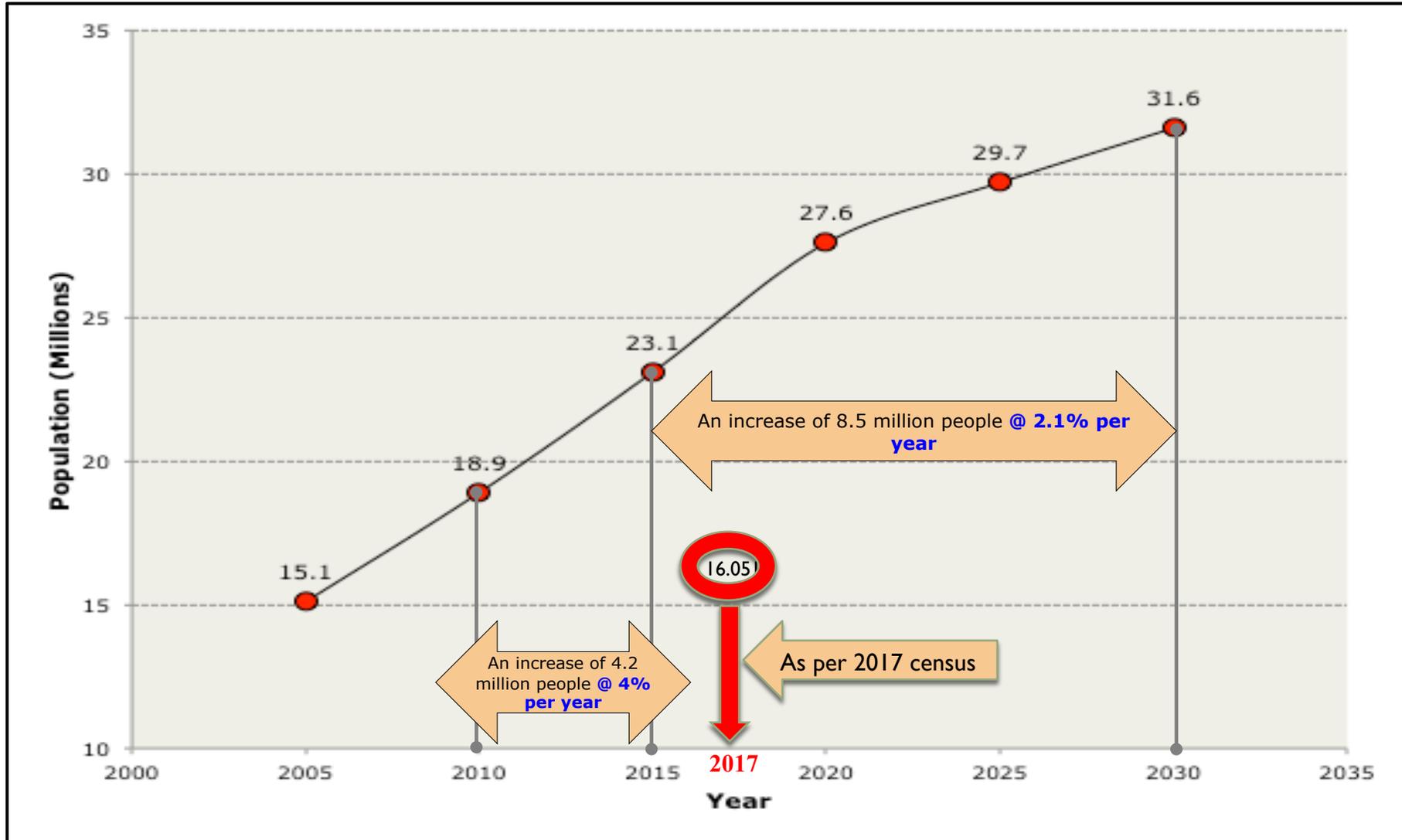
* Source: Excise and Taxation Department, GoS

Karachi At a Glance

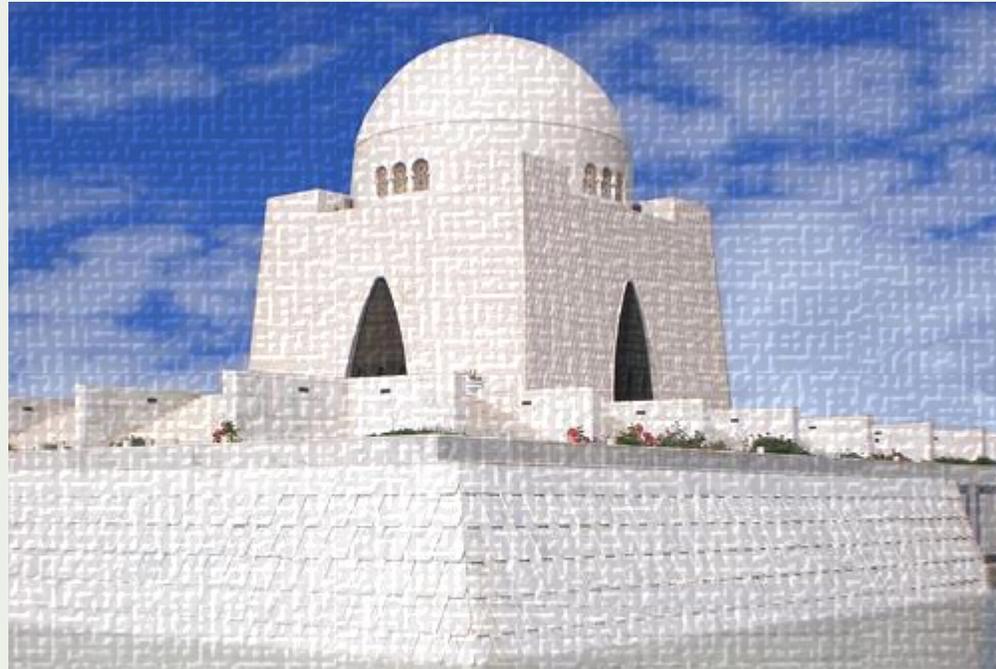
Administrative Area	3,600 sq. km
Built-up Area	1,200 sq. km
Administrative Structure:	
Districts Municipal Corporations	6
Cantonments	6
Metropolitan Corporation	1
District Council	1
Population as per 1998 Census	9.856 million
Population as per Provisional Census, 2017*	16.051 million
Average Annual Growth Rate as per Census, 2017*	2.60 %

* Source: Pakistan Bureau of Statistics (Census, 2017, Sindh, Table 5)

POPULATION & GROWTH [JICA Study]



Source: JICA KTIP 2030



TRAVEL INVENTORY



SHAHRAH-E-FAISAL – 2016



I.I CHUNDRIGARH ROAD – 2016



EMPRESS MARKET – 2016



KMC BUILDING, M.A. JINNAH ROAD – 2016

TRAFFIC CONGESTION



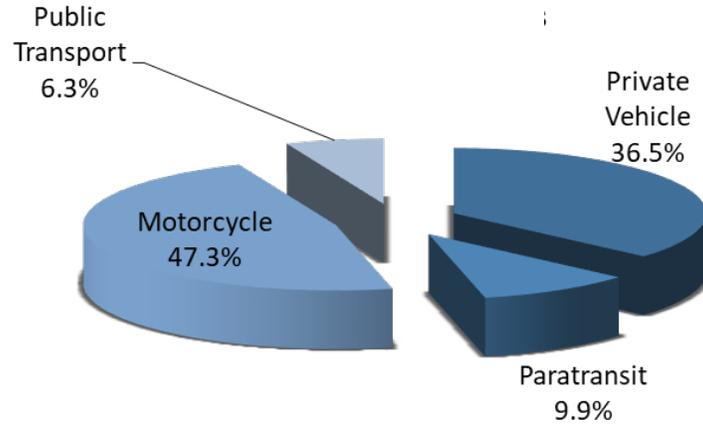
PUBLIC TRANSPORTATION SITUATION OF KARACHI

SITUATION ANALYSIS

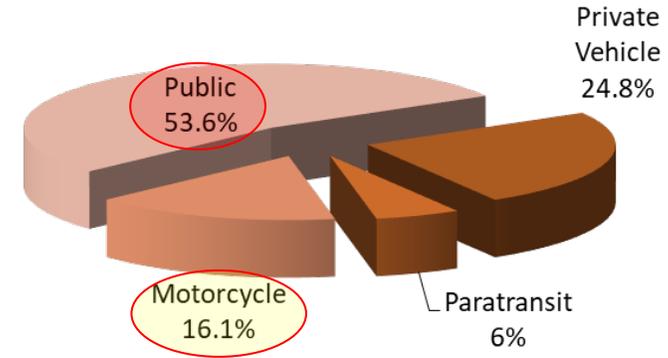
City	Persons Competing For One Bus Seat
KARACHI	45
MUMBAI	12
HONG KONG	08

There is an extensive modal shift from Public Transport in past decade

Vehicular VS Passenger Share 2008



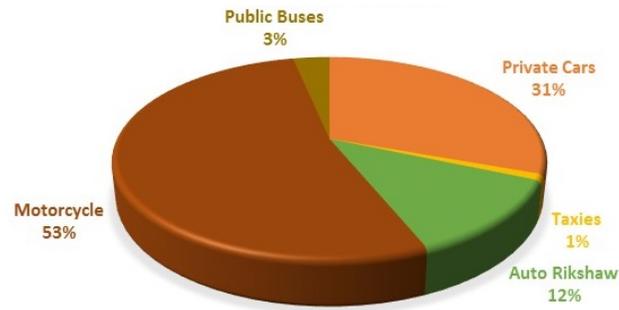
Mode Share by Vehicle



Mode Share by Occupancy

Source: Travel Demand Forecast Study for Karachi, JICA 2008

Vehicular VS Passenger Share 2018



Mode Share by Vehicle



Mode Share by Occupancy

Source: Karachi Bus Rapid Transit Project – ODBM Package, ADB 2018



KARACHI MASS TRANSIT PROGRAM



THE GOVERNMENT'S STRATEGY

LONG TERM

MEDIUM TERM

IMMEDIATE ACTION PROGRAM

THE KARACHI TRANSPORTATION IMPROVEMENT PLAN (2030)

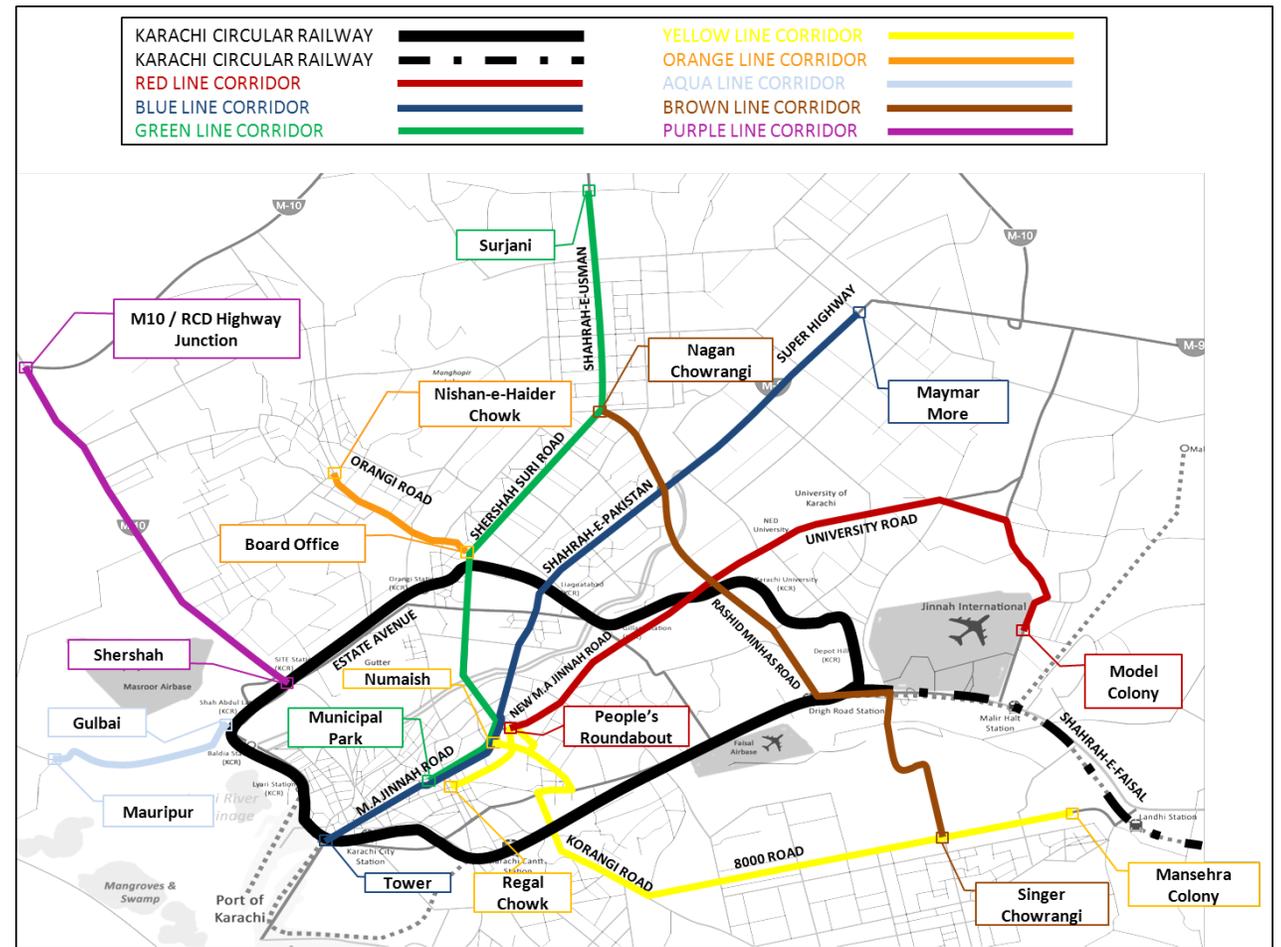
The Karachi Transportation Improvement Plan (2030) was developed by the Japan International Cooperation Agency (JICA) in 2012. The Plan included:

LONG TERM

- Revival of Karachi Circular Railway (KCR)
- Two Mass Rapid Transits (MRT) Lines (Blue and Brown)

MEDIUM TERM

- 6 Bus Rapid Transit (BRT) Lines (Yellow, Green, Orange, Red, Purple & Aqua)



THE IMMEDIATE ACTION PROGRAM

THE INTRA-CITY / INTER-CITY PEOPLES BUS PROJECT

Intercity

- Twenty (20) developed / under-developed routes identified for intercity bus operations.
- Induction of approx. 288 buses on 20 intercity routes structured.

Intracity (Karachi)

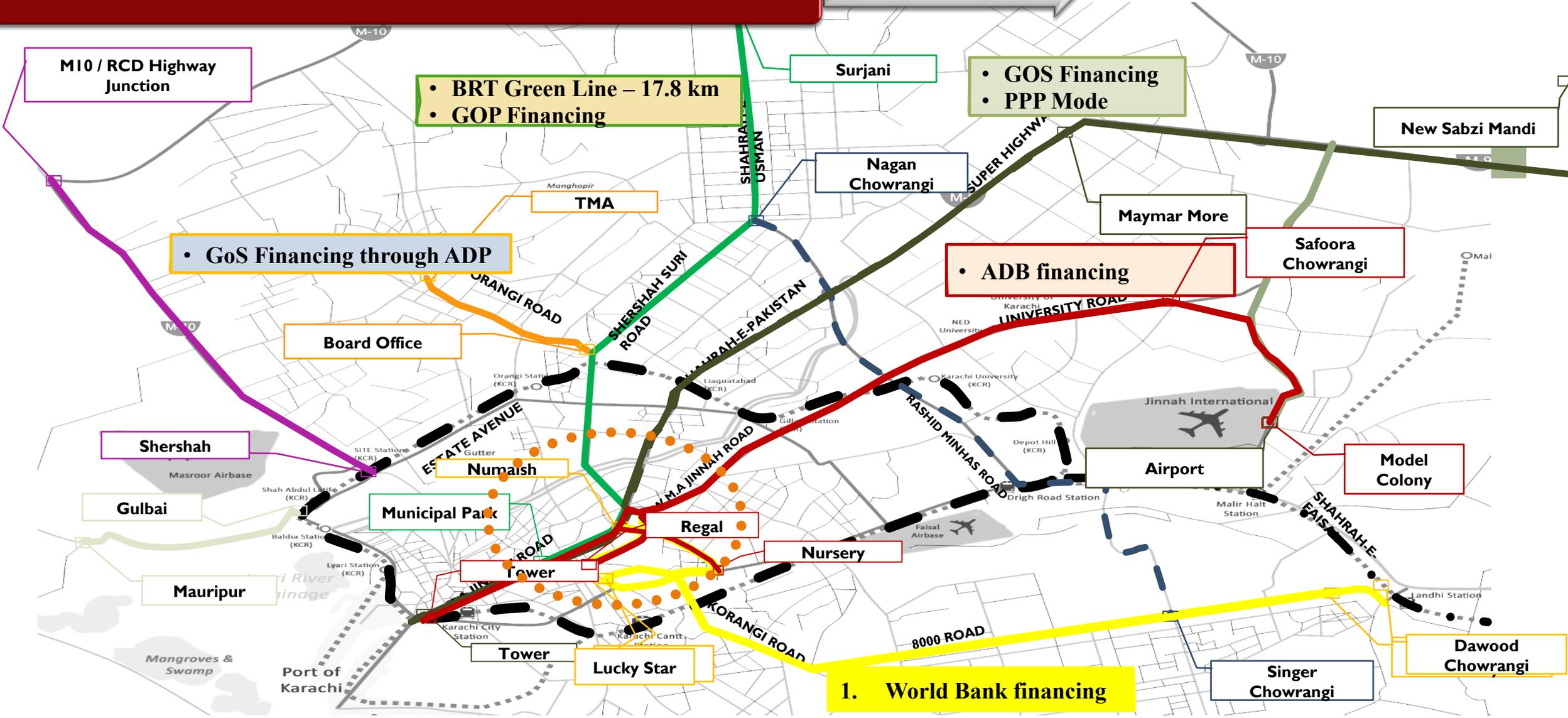
- Thirty (30) priority routes for operation of standard buses to supplement the MRT and BRT Route Network in Karachi.
- Induction of approx. 630 buses on 30 priority routes was streamlined in the first phase.
- The Projects conceived to provide immediate relief to the commuters.
- An innovative criterion to evaluate service quality / efficiency by use of performance monitoring.
- Easy financial conditions offered to local transporters.



BRT NETWORK



Karachi Mass Transit Plan

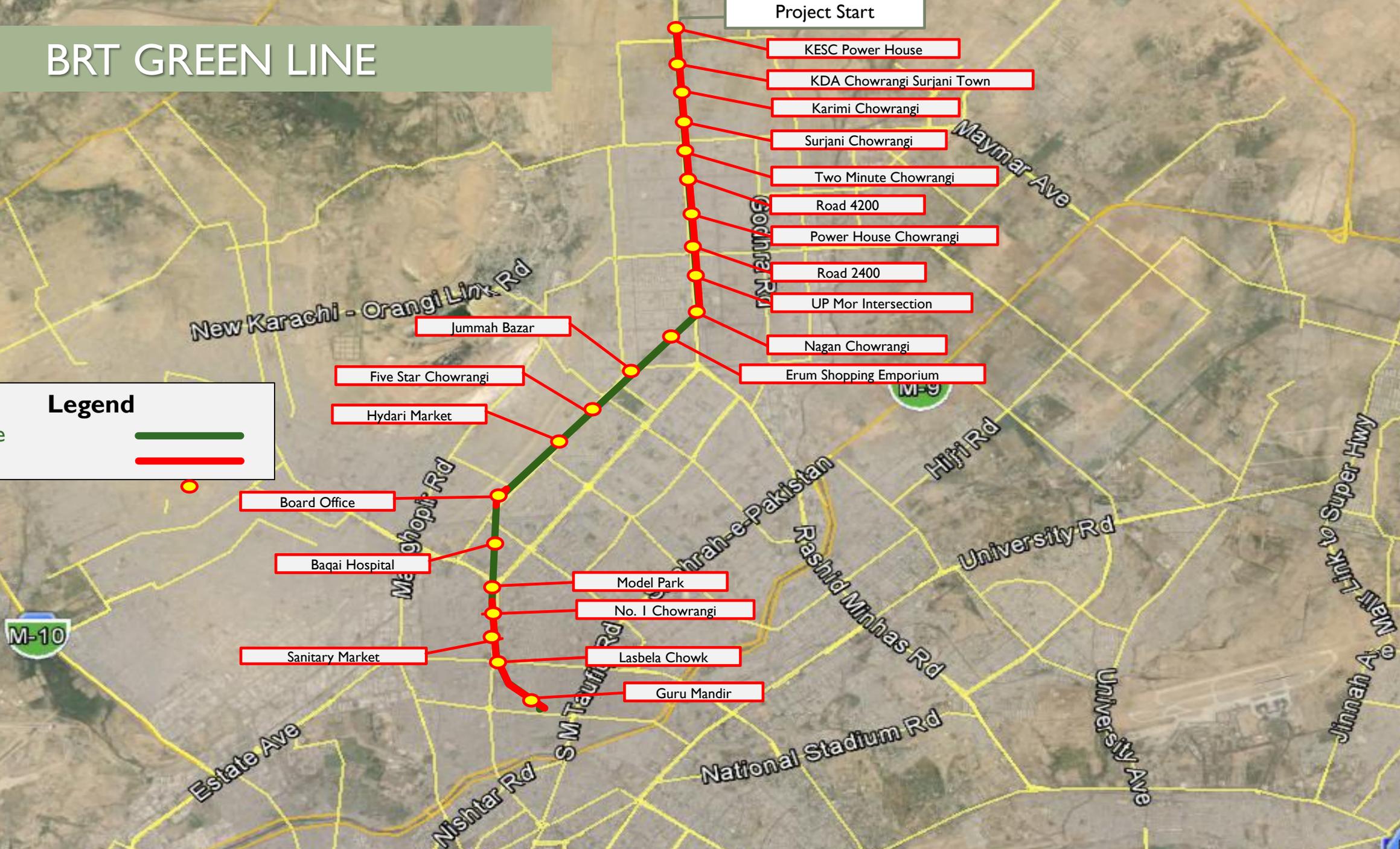


BRT GREEN LINE

Legend

At Grade 

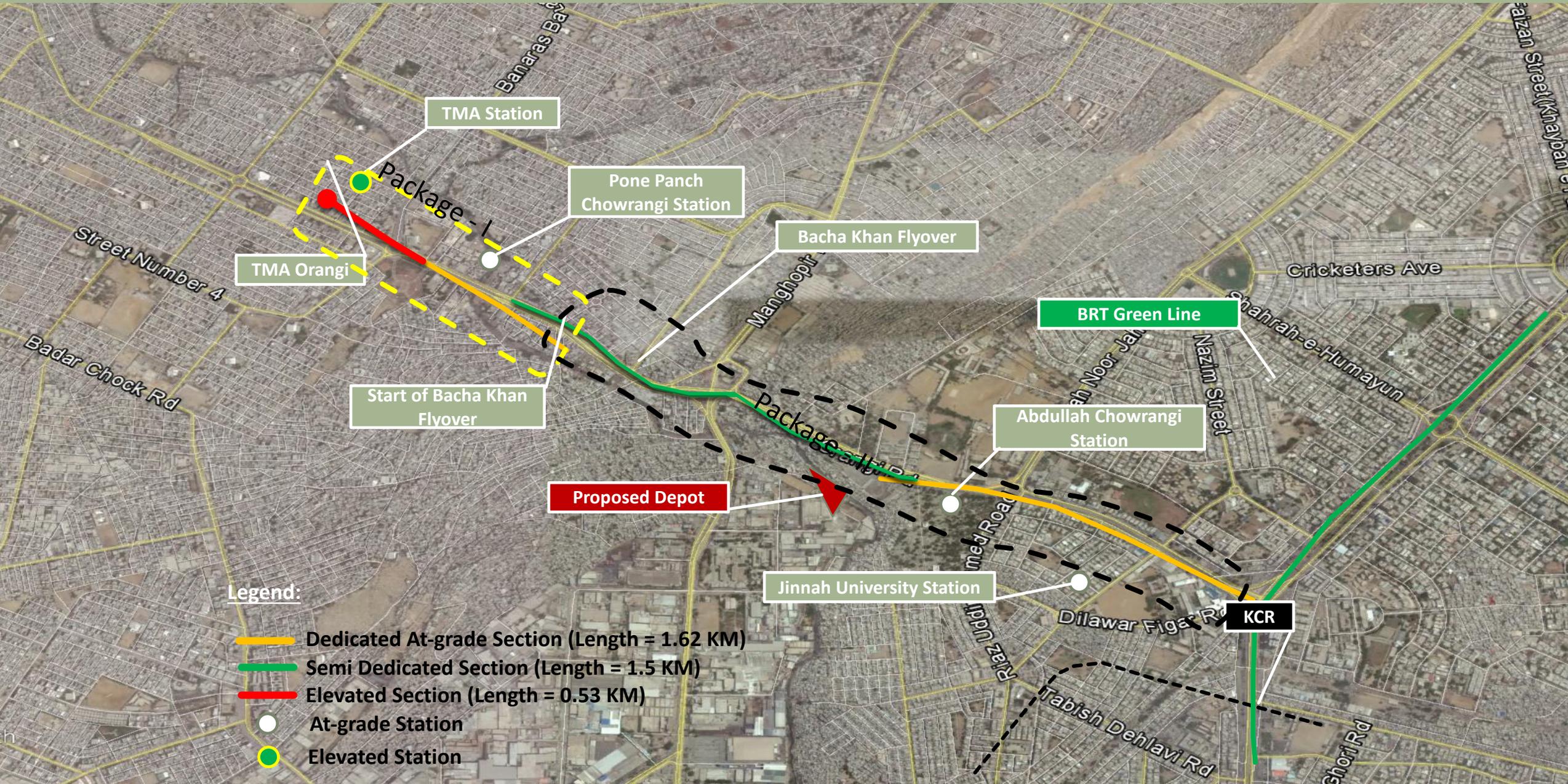
Elevated 



SALIENT FEATURES

System passenger-trips per day	300,000
Number of BRT stations	21
Elevated	9
At-Grade	12
Total length of dedicated busway	Approx. 22 kms
Elevated	14 kms
At-Grade	08 kms
Average distance between stations	800 m

BRT ABDUL SATTAR EDHI LINE (ORANGE LINE)



SALIENT FEATURES

- ❑ Total Length of corridor 3.88 KM
- ❑ Total Number of Bus Stations 05
- ❑ Number of Bus Ways 02
- ❑ Parking Capacity of Bus Depot 30 Buses (3.10 acres)
- ❑ Ridership 50,000 passengers / day

PROJECT ALIGNMENT – RED LINE



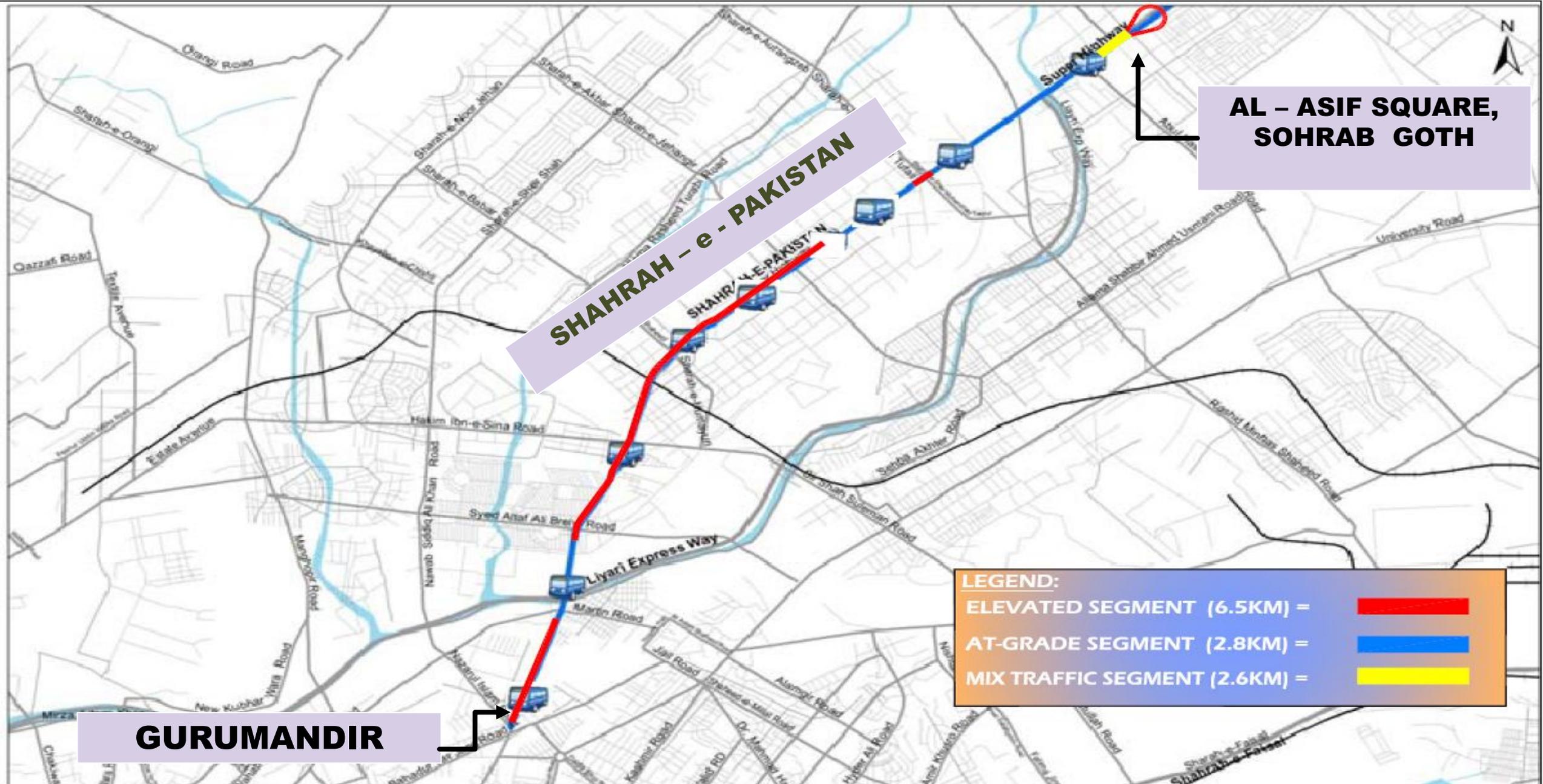
PROJECT DESCRIPTION

Salient Features

- 29km route
- 25 stations
- 3.9km of elevated structures
- 1.9km of underground structures
- On-street parking
- Mixed traffic lanes
- NMT facilities
- Corridor drainage system
- Street lighting



BLUE LINE BRT - ROUTE ALIGNMENT

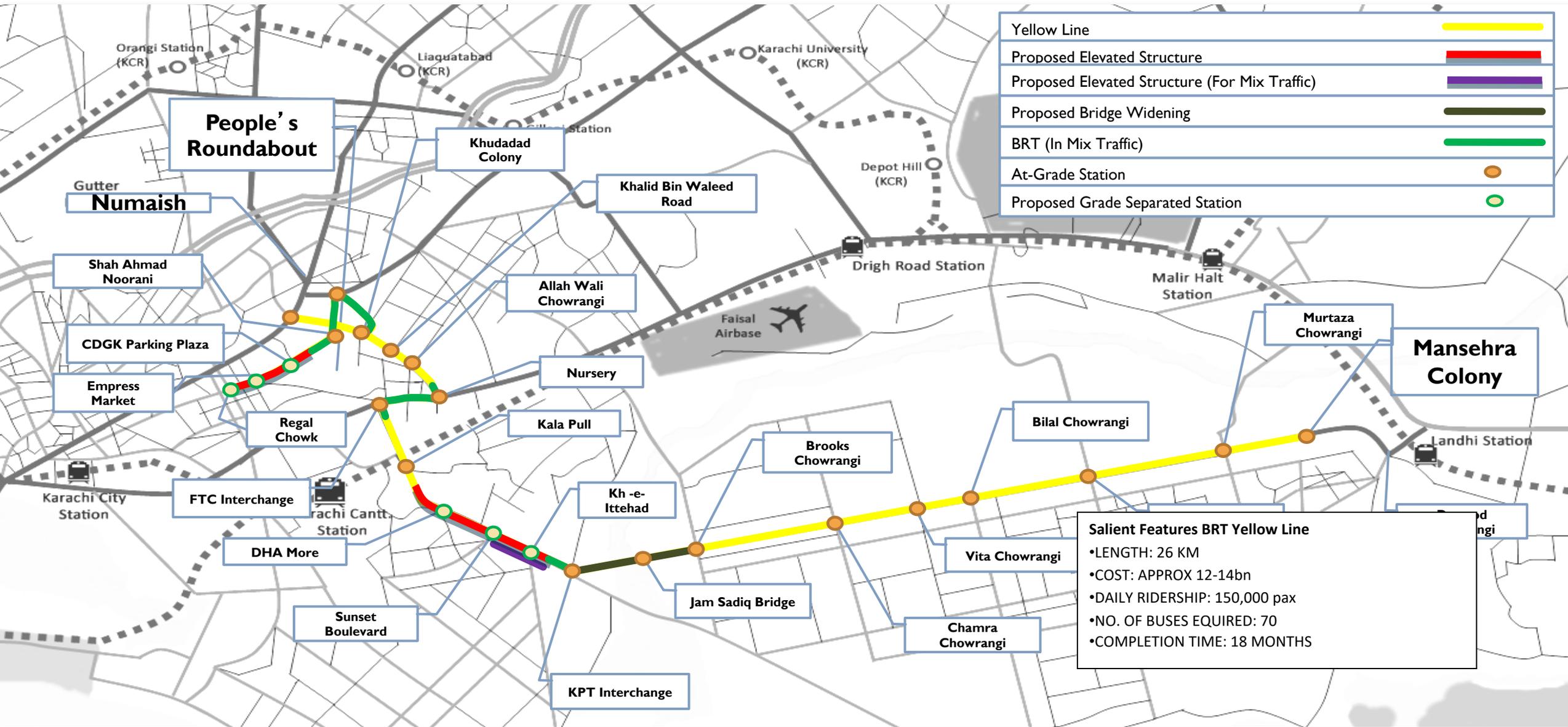


SALIENT FEATURES

- Corridor Length 10.1 km
- Elevated 5.7kms
- At-Grade 4.4kms
- Total Number of Stations 11
- Ridership 357,000/day
- Alignment Al-Asif to Gurumandir

BRT YELLOW LINE – ROUTE

QAUIDABAD TO SADDAR AND MAZAR-QUAID



Yellow Line	
Proposed Elevated Structure	
Proposed Elevated Structure (For Mix Traffic)	
Proposed Bridge Widening	
BRT (In Mix Traffic)	
At-Grade Station	
Proposed Grade Separated Station	

Salient Features BRT Yellow Line

- LENGTH: 26 KM
- COST: APPROX 12-14bn
- DAILY RIDERSHIP: 150,000 pax
- NO. OF BUSES EQUIRED: 70
- COMPLETION TIME: 18 MONTHS

SALIENT FEATURES

- Route Length: 26 KM
- Cost: 16 billion (Approx.)
- Daily Ridership: 150,000 Pax
- No. of Buses Required: 85
- Completion Time: 24 Months

BRT System Components

Infrastructure Component

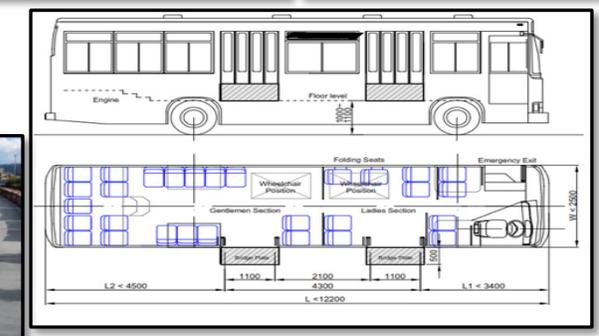
- BRT Corridor Configuration
- Geometric & Pavement Design of Runways
- Design of Elevated Segments
- Design of BRT Stations
- Design of Pedestrian Bridges
- Design of Depots & Terminals

Intelligent Transportation Systems (ITS) Component

- Precision Docking
- Automated Vehicle Location System (AVLS) & Fleet Management System (FMS)
- Signal Prioritization
- Fare Collection System
- Surveillance & Security System
- Passenger Information System

Operations & Management (O&M) Component

- Bus Configuration
- Fleet Size Optimization
- O&M Plan Development
- Concession Agreement Development



INFRASTRUCTURE COMPONENT

BRT LINE	ALIGNMENT	RIDERSHIP (Passengers/day)	MODE OF PROCUREMENT	PROGRESS
Green Line	Surjani Town to Municipal Park via: Nagan Chowrangi, Board Office, Nawab Siddique Ali Khan Road, Business Recorder Road, Gurumandir, Old Exhibition, M. A. Jinnah Road – Length: 27 km	400,000	GoP funding through PSDP	80%
Abdul Sattar Edhi <small>(Orange)</small> Line	TMA Office Orangi to Board Office Interchange. Length: 4 km	50,000	GoS funding through ADP	55%
Yellow Line	Mansehra Chowrangi Korangi Industrial Area to Old Exhibition via: Road 8000, Korangi Road, Kalapul, Sharea Faisal, Sharea Quaideen, Preedy Street, Regal, Old Exhibition. Length: 26 km	150,000	World Bank funding	Project approval process underway
Red Line	Model Colony to Old Exhibition via: Tank Chowk, M. M. Alam Road, Safoora Goth, University Road, Peoples Chowrangi, Old Exhibition. Length: 21.5 km	350,000	Asian Development Bank funding	Project design tasks completed
Blue Line	Gurumandir to Al-Asif Square, Super Highway via: Jahangir Road, S. M. Teen Hatti, Liaquatabad No. 10, Karimabad, Shahrah-e-Pakistan, Sohrab Goth, Super Highway (M-9). Length: 12 km	357,000	PPP Mode	Procurement process underway

ITS COMPONENT

S #	BRT Corridor	Implementation Status
1.	Green Line	<input type="checkbox"/> Government has appointed consultant for project preparation of Integrated Intelligent Transport System (IITS) with Terms of Reference mainly including: <ul style="list-style-type: none">▪ Network & technological Integration▪ Fleet Specification and On-board ITS equipment▪ Design parameters for ITS▪ Interoperability▪ Operational requirements for central Command & Control▪ Automated Fare Collection <input type="checkbox"/> The development of IITS will be under public procurement in Traditional mode. <input type="checkbox"/> Process for Prequalification of Contractors completed.
2.	Orange Line	
3.	Yellow Line	
4.	Red Line	
5.	Blue Line	

BUS OPERATIONS COMPONENT

S #	BRT Corridor	Implementation Status
1.	Green Line Fleet Requirement: 77 Articulated Buses	<ul style="list-style-type: none">• Government has appointed Consultant for preparation of detailed Operations Plan and transaction advisory services.• Procurement process underway in PPP Mode
2.	Abdul Sattar Edhi Line Fleet Requirement: 50 Standard Buses	
3.	Yellow Line Fleet Requirement: 104 Articulated Buses	To be taken up under the World Bank funding framework.
4.	Red Line Fleet Requirement: 100 Articulated Buses	Detailed Operations Plan is being taken up under the ADB's Project Development Facility (PDA), to be further taken up as per the ADB funding framework.
5.	Blue Line Fleet Requirement: 100 Articulated Buses	Being developed in PPP Mode.



REVIVAL OF KARACHI CIRCULAR RAILWAY

HISTORY OF KCR

The Karachi Circular Railway (KCR) was commissioned in 1964.

Remained an effective mass transportation system till 1984.

The operational efficiency kept deteriorating, resulted in reduction of ridership and subsequent closure in December 1999.

INITIATIVES OF GOS

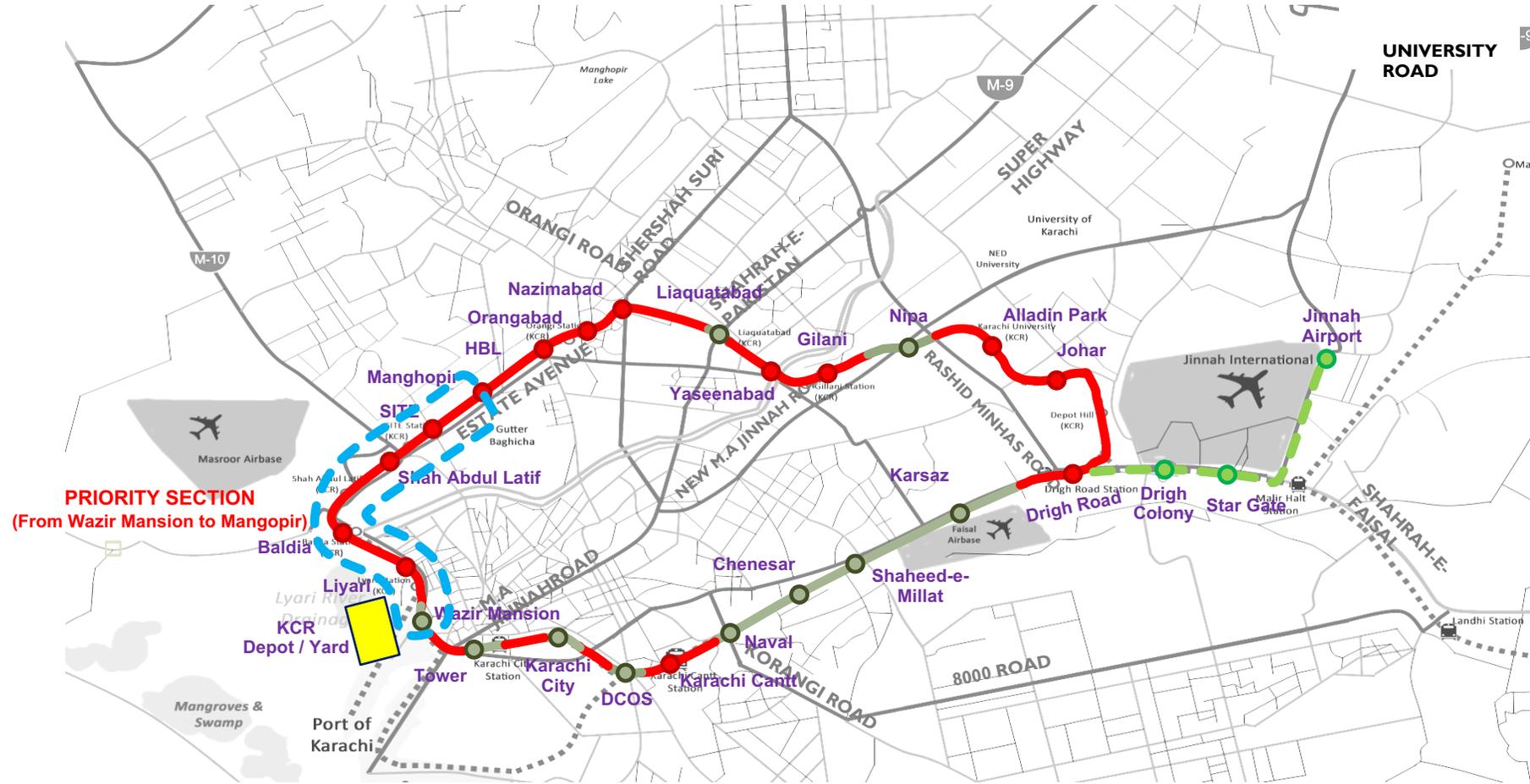
- On the request of Hon. Chief Minister Sindh the Hon. Prime Minister of Pakistan was pleased to approve inclusion of KCR in CPEC with sovereign guarantee on 7th December, 2016
- In 6th Joint Coordination Committee (JCC) meeting held on 29th December, 2016 at Beijing, China the Revival of KCR was agreed in principle and JCC instructed the Transport Joint Working Group (JWG) to workout proposals for implementation of KCR
- GoS has included a development scheme in ADP 2017-18 for construction of boundary fencing along the existing alignment of KCR for protection of RoW



SALIENT FEATURES



KCR ROUTE MAP



LEGEND			
	KCR (Double Track) At-Grade (Length = 17.79 KM)		Proposed Station Elevated = 14
	KCR (Double Track) Elevated (Length = 25.45 KM)		Proposed Station At-Grade = 10
	Future Connection in Airport		KCR Depot / Yard
	Priority Section (Length = 8.3 KM)		
	Main Road Network		
	PR Main Line (Double)		

SALIENT FEATURES

Route Length:	43.13 Km
On-ground	14.95 Km
Elevated	28.18 Km
Stations:	24
On-ground	10
Elevated	14
Ridership	550,000 / day
Locomotives	162
Seating / Train Car	240 passengers
Cost	US\$ 1.971 billion

PRESENT STATUS

DESCRIPTION	STATUS
Feasibility Study	<ul style="list-style-type: none">▪ Feasibility Report furnished to Planning Commission of Pakistan was forwarded to NDRC, Beijing, China on 6th September, 2017
PC-1	<ul style="list-style-type: none">▪ PC-I prepared by T&MTD was cleared by PDWP and forwarded to Planning Commission of Pakistan for approval▪ Modified PC-1 cleared by CDWP on 8th August, 2017▪ ECNEC approved the project in it's meeting on 6th Oct 2017
Inter Governmental Framework Agreement (FWA) for Concessional Financing	<ul style="list-style-type: none">▪ Submitted to Planning Commission & Ministry of Communications, GoP on 3rd February, 2017▪ ECNEC also advised MoC to forward FWA to NDRC China at the earliest

WAY FORWARD

ISSUES	DESCRIPTION
To be Resolved Between GOP & GOS	<ul style="list-style-type: none"><li>▪ Handing over of the control of KUTC to GoS<li>▪ Handing over KCR Right of Way (ROW) to GoS.<li>▪ Providing Sovereign Guarantee by MOF, GOP
Removal of Encroachment	<ul style="list-style-type: none"><li>▪ In pursuance of the directives of Honorable Supereme Court of Pakistan, the district administration, KMC & DS Railways have started encroachment removal drive from KCR Right of Way.
Protection of ROW	<ul style="list-style-type: none"><li>▪ GoS has already approved ADP Scheme for providing Fence to protect KCR - ROW



THANK YOU