



**Project Implementation Unit
Karachi Neighborhood Improvement Project
Planning & Development Department
Government of Sindh**



"Rehabilitation and Improvement of Road from Fishermen Chowrangi (old Coastguard Chowrangi) to Fishing Village (Korangi)" under Karachi Neighborhood Improvement Project, P&D department, Government of Sindh

Birth of KNIP

A rapid assessment was conducted by the World Bank in 2014 called Karachi City Diagnostic (KCD) to identify gaps in various municipal and other services provided to the city. According to the findings of the study the urban environment in Karachi, including the quality of its' public spaces has been declining, along with infrastructure provision. Roads in Karachi lack basic safety features and not regularly maintained which reduce accessibility and mobility, particularly for women, the elderly, and people with disabilities. The KCD estimated that at least US\$ 10 billion will be needed in the next 10 years to close the city's infrastructure gaps and transforming Karachi into a livable city and it cannot be achieved through any single project or intervention. As a result, **Karachi Neighborhood Improvement Project (KNIP)** emerged to focus on fast, low cost & high impact interventions to respond to emergent city needs. It is a four-year project started in 2017 by Govt. of Sindh with support of WB at a cost of US\$ 98 million (US\$ 86 million by WB and US\$ 12 million by GoS). The project is being executed by P&D Department. Under the project three neighborhoods (Saddar, Malir and Korangi) of city are being upgraded. Recently, Saddar part (People's Square) of Phase-I has been inaugurated and Korangi part (below mentioned) is being inaugurated on 5th Jan 2021. However, Malir part is being made ready for inauguration.

Project Information

This Sub-project called "*Rehabilitation and improvement of Road from Fishermen Chowrangi to Ibrahim Hyderi Fishing Village (Korangi)*". Some salient information is as follows:

Length of the project is 4.9 km having footpaths on both sides, service road on one side, linear park having green space.

This segment of the dual carriageway was selected due to its highly dilapidated condition. The median was full of garbage and water was drained on the road. In segment 2 there is an 8-meter- wide road connecting to Ibrahim Hyderi goth through a flat segment. This stretch of about 526 meters was hilly having high slopes, therefore, impassable by vehicles.

Finally, another stretch of 1.3 km was available to access the village in a very bad state not fit for vehicle movement specially loaded truck originating from Fishing Village. The termination point of



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the road was very abrupt therefore, the 550-meter additional length was technically considered important to be included to reasonably use the access. The project started on 25th July 2019.

Rationale for Selecting Sub-Project

This area was selected due to dense and vulnerable populations all-around all along the length of the sub-project where an old fishing village is located that has no infrastructure. This area-block has a population of around 0.4 million low to middle-income people having small houses and apartments having small streets. The access through the road was almost non-existing due to poor carriageway conditions though the main collector corridor was available however, the right of way was very badly maintained. The rains had destroyed the surfaces below the wearing surfaces and the condition of water supply, sewerage, and stormwater infrastructure was almost incapable to serve the area and keep the road in properly maintained condition.

Salient Design Features

Following are the salient design features:

- Rehabilitation of existing Roundabout as Public space, dual Carriageway, median, linear park and streets.
- Intersection design, Street lights, bus bays
- New construction of a well-designed single carriageway by making the slopes gentle for the vehicles to access Ibrahim Hyderi village.
- Improve pedestrian safety with appropriate mid-block crossings, junction crossings,
- LED Lighting, road-calming features.
- Improving drainage; water supply, sewerage, & storm drainage
- Improving mobility with well-designed bus stop.
- Creating designated spaces for trash disposal

Salient Engineering Features

Carriageway

Initial 3.25 km road, asphalt binder and wearing course along with footpaths, water line works, stormwater drains, electrical works, and landscaping of the median was done to give excellent riding service for vehicles and to secure the pedestrian movement along the roadside. The central median is equipped with landscape elements, secured trees, paver floors to avoid any accumulation of solid waste and for the public to enjoy the facility without much care on maintenance.

Cutting of hard rock to get a negotiable gradient for the design truck and supporting the cutting slopes



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with RCC retaining walls on both sides (175-meter-long) of the Box cut resulted due to this cutting of rock. The retaining walls are backfilled, and footpaths were constructed for the residents for ease of access to their properties. The extended length of 550 meters to give the project a smooth transition from a very high level of service to almost nothing.

Open Spaces

Fishermen Roundabout (old Coastguard roundabout) has a dia of 82 meters and with all included the length of it becomes 258 meters. Landscape improvement for Chowrangi, public spaces, and median includes 8.5-meter-long boat model, installation of Gezabos, monuments, and planters.

Water Supply

One of the best activities undertaken was to manage the best network for water supply. The water supply system was redesigned and planned in a way to save it from punctures and managing to provide main and sub-main supply lines on both sides by removing the main water distribution from the centre of the road where it was found damaged all along the length. The pipeline has been provided with proper planning and coordination. High-Density Polyethylene pipe is used for drinking water supply lines i.e. 400 mm dia starting from about 1.8 km.

Stormwater Drainage

A need to dispose of the stormwater into the natural drains was ascertained, therefore, a 500-meter-long stormwater drain has been constructed to smoothly drain out the rainwater. It will ensure that about 2 km of the road on both sides will get efficient drainage whereas the rest will be drained out on the other side of the road as per the natural gradient. For this purpose, 8 inches and 24 inches diameter pipes with Reinforced Cement Concrete (RCC) chambers were installed to control the flow. As a result, water, an agent to destroy the road will never be hazardous for this segment of the road. It also got tested in the flooding of August 2020 and has resulted in an efficient and sustainable solution to the rainwater.

RCC drain at Fishermen Chowrangi (old Coastguard Chowrangi) on the circumference to drain out the heavy water accumulated due to high-density drainage lines passing under the Chowrangi. The length of the drain is 240 meters and circular in shape.

Sewerage

The sewerage network was unserviceable and required complete retrofitting and now the brand- new network has been placed which will drain out all the sewerage to the city grand sewer network. Some trunk sewer network required some cleansing which was also done to keep the flow efficient and stop any backflow.



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Electric Supply & PTCL

KE and PTCL works have been done to protect their services and should not be prone to any road cutting. Cross pipes were placed so that in need of crossing they should plan it through those already laid pipes.

Environmental Safeguard

An Environmental and Social Management Plan (ESMP) has been prepared to protect the environment and social safeguards. NOC has also been taken from the Sindh Environment Protection Authority (SEPA). A Tree Protection and Management Plan has also been prepared to protect trees. Trees were counted at the site and all information is provided in the shape of a report. There are approx. 220 trees above 2-meter height which have been saved.

Stakeholder Consultation

Stakeholders' participation is a mandatory requirement of KNIP to take all the project-related decisions. During the planning and execution of the sub-project, consultations were conducted with all relevant stakeholders. A Matrix of stakeholder's consultation were prepared to incorporate comments in the final Urban design.

Benefits

This sub-project is a unique project as it has not only eased in commuting but also brought many social, economic and health benefits.

- **Ease in Commuting**

The improved road not only provides a smooth ride to the travelers but also saves their travelling time and energy. After this road is constructed, and an efficient and better level of service, traffic connection will be provided to the fisheries and fishing village where a huge population travels for personal and business reasons. This will bring a lot of commuters and will become the destination of visitors and businessmen. KNIP constructed road is taking heavily loaded trucks and smoothly providing a higher level of service for logistic loads.

- **Social and Gender Benefits**

The well-designed public spaces will provide a very conducive environment for social interaction not only to the residents but also to the visitors. Gender integration is a compulsory element in all KNIP initiatives through a Gender Action plan (GAP) to increase women participation and to provide maximum benefits of the project to women and vulnerable groups. Women constituted about 30% of all the Consulted stakeholders. In Korangi many steps were taken to ensure the safety of women and other vulnerable groups of society such as road safety for pedestrians, women, and children, by



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taking various measures such as pelican crossing and installation of proper road signs. The waste-bins at public spaces will be installed in a gender-friendly manner.

▪ **Economic Benefits**

The property values of this block will rise due to the best infrastructure and approach provided thereby helping people to gain economical uplift.

▪ **Health Benefits**

Open and public space plays an important role in the mental and physical health of an individual. Unfortunately, there is a huge shortage of public spaces in the city especially in underprivileged areas like Korangi. This sub-project will fill this gap and provide a good public space for the residents of Korangi. The dust, noise and smoke have reduced remarkably therefore reducing the stress on the public living in the nearby areas including the businesses.

Quality Control

The quality control was ensured in the following ways:

- A thorough review of the design.
- Placement of the Quality Assurance /Quality Control mechanism
- Inspection of material and adhering to the standards as per the specifications
- The inspection and testing were strictly done and complied with the specifications rigorously.