

# Engineer Report - Maintenance & Design

## Land Acquisition Details

Phase II requires 1.6510 hectares of land, including private, government, and institutional plots.

Additional 0.0380 hectares acquired for road widening under the Seaport-Airport stretch in Kakkanad.

## Design Alternatives

Two alternative routes were considered: JLN Stadium to Infopark and Kalamassery to Infopark. The chosen alignment provides better integration with railway and bus terminals.

## Technical Impacts

Issue	Impact	Engineering Note
Excavation near residence	Safety risk to one house	Retaining wall recommended
Loss of commercial frontage	Hotel operations affected	Parking and access redesign planned
Shift of access roads	Temporary disruption	Resettlement package with alternate routes

## Mitigation Engineering Measures

Retaining walls to safeguard residential structures near excavation sites.

Common parking facilities for affected establishments.

Reinstallation of water sources and drainage systems.

Road widening to improve access and reduce accident risks.

## Depot and Construction Notes

Track switches at Kalamassery depot show wear and need replacement within 2 months.

Pilot project on energy-efficient lighting has been initiated in JLN Stadium station.