

Utility Tunnel in GIFT City, India

Full Description

Project Summary:

Background

Public utilities are normally located in the ‘public commons’ of the urban landscape, namely above or under roads and pavements. As the density of urbanized communities increase, the maintenance, renewal and upgrade of utility infrastructure in public commons real-estate has become progressively more complex and expensive.

Infrastructure sharing of physical assets between different utility providers can maximize the utility of infrastructure and/or minimize costs needed to build and operate assets, creating a win-win situation for parties involved especially cost-savings from reduction in capital investment required for expanding, maintaining, and upgrading network connectivity.

Several countries have developed utility corridors/utility tunnels that are typically used by different utility providers to lay their physical assets there, for example, cables for providing basic facilities such as power, and telecoms connectivity. In addition, pipelines for water supply, town gas supply, district cooling water, wastewater collection and even pneumatic solid waste management systems can also be laid in the same tunnel.

Project Structure

Gujarat International Finance Tec-City (GIFT City) is an integrated development on 886 acres of land with 62 million sq ft of built-up area envisioned as an emerging financial hub in Gujarat, India. GIFT City features office spaces, residential apartments, schools, hospitals, hotels, clubs, retail and various recreational activities. As well as a multi-service special economic zone.^{[1](#)}

A Utility Tunnel was developed across the city to accommodate all utilities including power cables, raw water supply line to the water treatment plant (WTP) and treated water supply from the WTP to various developments, district cooling pipes, ICT cables, automated waste collection pipe, and fire hydrant water pipes, among others.^{[2](#)}

The Utility Tunnel at GIFT City will approximately be 16 kilometers long, 8 meters wide and 11 meters deep. The provisions are made in the tunnel for smooth access, separation of utilities, proper drainage, lighting, and maintenance and security avoiding the need to excavate the roads for future repair, maintenance, renovation and upgrades of any utility.^{[3](#)}



GIFT Utility Tunnel [4](#)

Key players for delivering improved services

Gujarat International Finance Tec-City Company Limited (GIFTCL) was incorporated in 2007 as a joint venture between Gujarat Urban Development Company Limited (GUDCL) and Infrastructure Leasing and Financial Services Ltd. (IL&FS).[5](#)

GUDCL facilitates urban development by assisting state government in formulation of policy, institutional capacity building, project implementation, and in raising funds from multilateral agencies for urban projects.
[6](#)

Mechanism/s for Maximizing Funding for Infrastructure

For utility providers, Multi-utility corridors & tunnels enable the offset of initial capital outlay required in laying utilities and also then paying, via leasing fees, for only a share of the cost of creating the multi-utility corridors & tunnels.

For the master developer, Multi-utility corridors & tunnels create cleaner and smarter real-estate with higher utility reliability that are more appealing to blue-chip anchor locators.

For Financiers of multi-utility corridors & tunnels, there is a stable long-term revenue from the long-term leasing to utility providers that are normally rated as low risk.

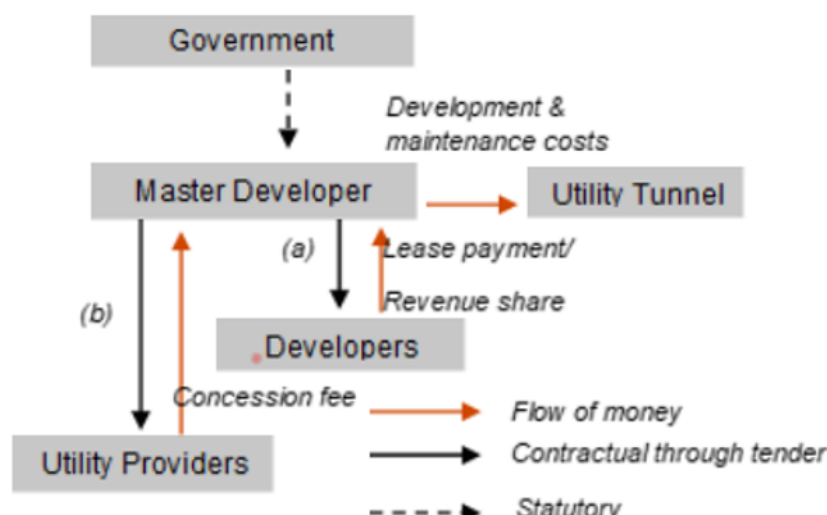
For municipal governments, as the ultimate asset owner of multi-utility corridors & tunnels create a way of monetizing the public commons to create a stable own-source revenue.

GUDCL appoints an EPC that can conduct works related to the utility tunnel through public tenders. Tender announcements are accessible in their e-procurement system.

The cost of the tunnel is estimated at INR 3.15 billion.⁷ GUDCL issued separate tenders for different components. For example, GIFTCL launched the tender access control system for the utility tunnel was launched in 2021 with a contract value of INR 9,66,000.⁸

The initial cost of a utility tunnel can be recovered within at least four years.

Typical Business Model



(a)	Land lease or Joint venture agreement between the master developer and the developer
(b)	Concession agreement between master developer and utility providers for provision of utility services and lease of utility tunnel
Government	Landowner
Master Developer (GIFTCL)	Responsible for overall development including provision of infrastructure services that increase attractiveness
Developers	Through a land lease agreement develop certain components of the integrated development
Utility Providers	Provides utility services in the integrated development and rents the utility tunnel

Lesson Learned

Implementation

- High initial outlay for developing multi-utility corridors and long-term maintenance liability is a significant barrier for adoption which requires a longer-term view of benefits in order to justify investment decision by governments. But this can also be addressed commercial structures that require all utility providers to use the infrastructure and so create long-term stable revenues that makes the capital investment attractive for financing.
- Utility tunnels remove the need for repeated excavation and reinstatement procedures over its lifetime of 60 to 100 years and therefore eliminates many of the longer-term costs. For example, maintenance works carried out within utility tunnels reduce the size of the working area and requirements for equipment, labor and materials.⁹

- Master developers of a greenfield site can rent space to utility owners.¹⁰

Footnote 1: [Gujarat International Finance Tec-City](#)

Footnote 2: <https://www.giftgujarat.in/utility-tunnel>

Footnote 3: Ibid

Footnote 4: <https://www.giftgujarat.in/utility-tunnel>

Footnote 5: [Gujarat International Finance Tec-City \(GIFT\)](#)

Footnote 6: <https://www.giftgujarat.in/promoters>

Footnote 7: https://www.bentley.com/en/project-profiles/gujarat-international-finance-tec-city_integration-of-urban-infrastructure-through-utility-tunnel

Footnote 8: [Implementation of Access Control System for Utility Tunnel Phase-2 in Gift City \(Dta and Sez Area\)](#)

Footnote 9: [Sustainable utility placement via Multi-Utility Tunnels](#)

Footnote 10: Ibid

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[Financing and Risk Mitigation](#)

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