



Review Paper On Elevated Rail Corridor For Mumbai Rail

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Abstract: Mumbai is the busiest city in India and carries lakhs of people from their home to office in their daily routine. This network makes local trains busy for 24 hours per day, where people travel 4 times more than capacity despite being so they could not lay railway tracks due to so much contested area. The idea was only as a solution to this problem Born and thus proposed the concept of "elevated rail corridor" which utilizes the above the railway tracks and while the railway corridor structure has made exciting improvement to its network between the cities.

Keywords; Mumbai railway corridor, Elevated corridor, Management of corridor, Construction of elevated corridor, Improvement of rail lines.

I. INTRODUCTION

The Western Railway Elevated Corridor, also known as the Oval Maidan-Virar elevated corridor, was a proposed fast transit corridor that would connect Oval Maidan and the Virar elevated corridor, and would operate along the same alignment as the Western Line of the Mumbai Suburban Railway.

This section begins with a survey of traffic and vehicle issues in urban areas of the country. This lags behind the discourses of urbanization in Italy and the country's urban vehicle approach, and holistic practices in building elevated corridors. The project, to be built at a cost of about Rs 20,000 crore, will be responsible for the construction, operation, and fare fixation of the line. And the collection is being assigned privately to the group.

The initial rate of return was 5.10 percent for the full corridor (Oval Maidan-ChurchgateVirar) and 8.07 percent for Mahalaxmi Virar. The fare structure for the corridor will be similar to that proposed for Mumbai Metro Lines 1 and 2. Although the Western and Central corridors of the Mumbai Suburban Railway network form the backbone of the city's transport network, there has been a long-standing demand for air-conditioned services in Mumbai. In addition, the existing suburban system is unable to handle the passenger volume. The new corridor will fill this gap not only by redistributing traffic into the mass transit system, but also by diverting a portion of passenger traffic from the existing suburban system and roads. With a daily suburban commuter movement of around 6.5 million, there is no integrated plan for the transport system in Mumbai, as is the case in many other cities. The 62-km corridor will run from Churchgate to Virar, along the existing Western Railway route, with an 8-km underground section and an extension of about 12 km at ground level between Santa Cruz and Vile Parle.

METHODS

Different methods used in rail corridor

1. Underground rail corridor
2. Elevated rail corridor



Underground rail corridor

1. Underground boring using TBM (Tunnel Boring Machine), otherwise called MOLE, is a machine used to extract bores with a circular cross-segment through mud and shale strata. They are hard shale, sand and can drill through almost anything in middle.

2. The length of the passage can go up to 16 meters while the width is one meter to the right. Messages of one meter or more are not routinely carried out using trenchless development strategy or flat directional penetrating instead of TBM. Passage drilling machines are used as an alternative, as opposed to the penetrating-and-impact (D&B) strategies in mud-moving and traditional hand mining. TBMs have the benefits of limiting the destabilizing effect on the surrounding ground and creating a

3. Smooth Route Cedar. This basically reduces the cost of covering the route and makes it successful for use in strictly urbanized areas. The significant drawback is the direct cost. TBM is expensive to develop and can be difficult to transfer. In any case, as current routes become longer, the cost of drilling machines versus drills and impacts is in reality lower, on the grounds that burial with TBMs is significantly more efficient and results in a smaller enterprise.



Elevated rail corridor

1. A significant portion of the elevated rail corridor bridge structures are being developed using a pre-thrust section introduced using an under thrust brace process. This Viaduct Enables Deck Obstruction

2. Viaducts are multi-spanning over scaffolds that cross roads or waterways or valleys. On guard train ventures, the length of viaducts typically ranges from 40 m to 50 m requesting between decks, during last month's construction of the viaduct, decks have

been continuous in several areas along the course. Three supports are being used at all times and together they will form approximately 11 kilometers of the viaduct deck structure.

Cost Comparison

As we have study the cost of construction is more as underground construction,
 For Elevated corridor constriction cost is -7438. Cr
 As Underground rail corridor cost is -19642.Cr
 difference in cost is 12109. Cr

Suggestion's

1. An elevated railway corridor has been built. Already surveyed to be aligned with the western edge of the Western Railway suburban corridor. This means that the elevated corridor will replicate the existing route and will compete for passengers through the same options.
2. The Western Railway has only vacant land between Borivali to Jogeshwari and Bandra to Dadar for laying the pillars of the elevated corridor. This would mean that Western Railway would have to acquire a large number of costly multi-storey properties between Jogeshwari and Bandra and Dadar to Churchgate to lay the elevated corridor.
3. There are several road over bridges on the Western Railway tracks between Churchgate and Virar which will have to be crossed on double-decker bridges, making them very complex and costly.
4. Western Railway will have to build this extremely costly project and at the same time maintain the same fare structure as the existing sub-urban railway network, making it highly economically impractical to use the project.

Advantages

1. Low cost of travel.
2. Best in Urban and Architectural Design.
3. More use plan in less land.
4. Network Extended of linear parks and quiet streets for safe walking and cycling,
5. Less disruption to traffic and trains during construction.
6. Improved traveler experience, views. And route finder.
7. Technical and operational requirements for an effective public transport network.
8. Fire-safe coach.
9. State Workmanship Scheme and Electronic

Disadvantages

1. Financial modeling to make the project viable
2. Integration with the existing mode of transport.
3. Its manufacturing cost is high.
4. Other costs such as land acquisition, resettlement and resettlement costs, and also litigation costs.

Conclusion

As per suggestions, there should be suitable planning and use to limit the impact on the current situation so as to cause minimal hassle or no burden to individuals. Any infrastructural advancements and changes completed in the City are intended for the individuals living in the City.

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