Alternative Alignment

The study carried out by M/s CES suggested certain alternative to the alignment originally proposed in the D.P. of the MCGM. In view of the report of M/s CES and the alternative alignment suggested by them, MCGM had appointed separate technical consultant M/s Pentacle Consultants (India) Pvt Ltd. to prepare a Detailed Project Report. M/s Pentacle Consultant Pvt ltd had in the year 2015prepared a Detailed Project Report on alternative alignment for GMLR. In the DPR M/s Pentacle had in their report suggested some options.

Among the suggested options, the alignment comprising of an Elevated corridor connecting WEH near Goregaon Flyover and EEH near Mulund running along Aarey milk colony, Powai Lake and Bhandup Complex area along Trunk Main water line was proposed as the best option and the detailing has been carried out by them for this option. The option envisaged approx 13.6km of an elevated road with 1.7km connector and 1.5km at grade road at entry/exit at WEH & EEH respectively. The alignment passes along existing Aarey Road in Aarey colony and then through Bhandup Complex up to Mulund. The alignment further traverses to Khindipada on existing Goregaon Mulund Link Road crosses LBS Marg and end up on EEH as shown in figure: 1
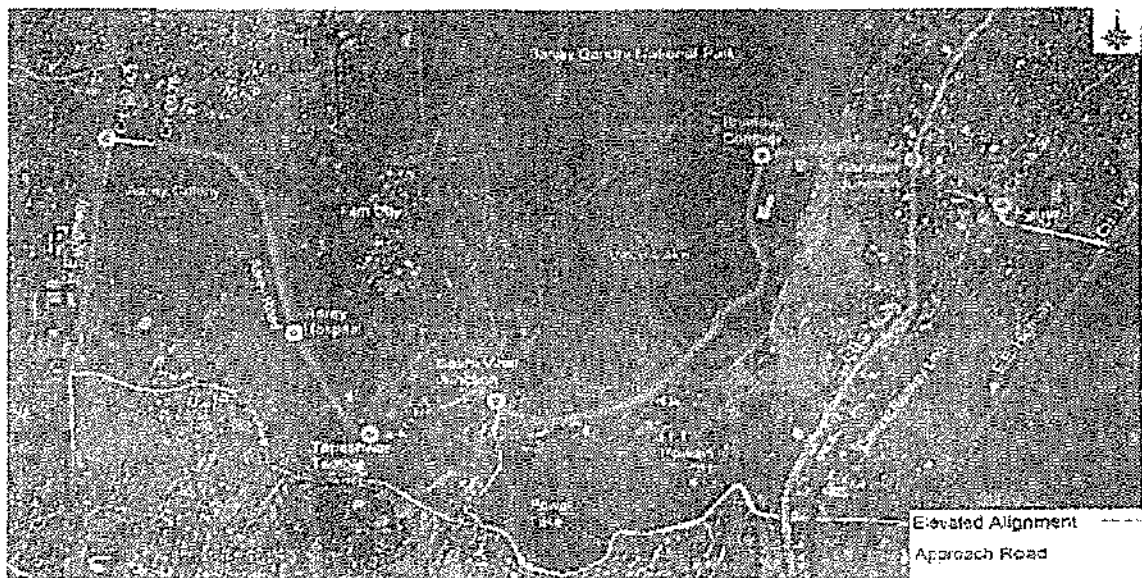

Figure:1Proposed GMLR Connectivity (Based on M/s Pentacle study 2015)

However, due to various constraints namely, removal of large number of trees, Safety of Water reservoir, Zigzag alignment, more number of PAP's in the proposed alignment along Aarey colony, L&T,

1 Alignment for proposed GMLR Tunnel

1.1 Introduction

This alignment report is prepared for the proposed Goregaon Mulund Link Road (GMLR) for the Municipal Corporation of Greater Mumbai (MCGM).

The proposed new GMLR corridor is expected to connect the eastern Expressway to the Western Expressway through film city via a Tunnel under the Rajiv Gandhi National Park. This report is to finalize the suitable alignment as per the specifications and considering minimum tree cutting along the alignment.

This alignment is designed considering the three lane carriageway per direction to accommodate the projected traffic for next 20 years. The alignment will link the film city road and the Khindipada road which shall be extended to three lane carriage way per direction as per direction by MCGM.

1.2 Scope:-

This scope of work shall consist of preparation of detailed Engineering design report with a view to identify feasible alternative alignment design that offer more cost effective and / or more easily constructed solutions within scope of contract agreement subject to approval of MCGM.
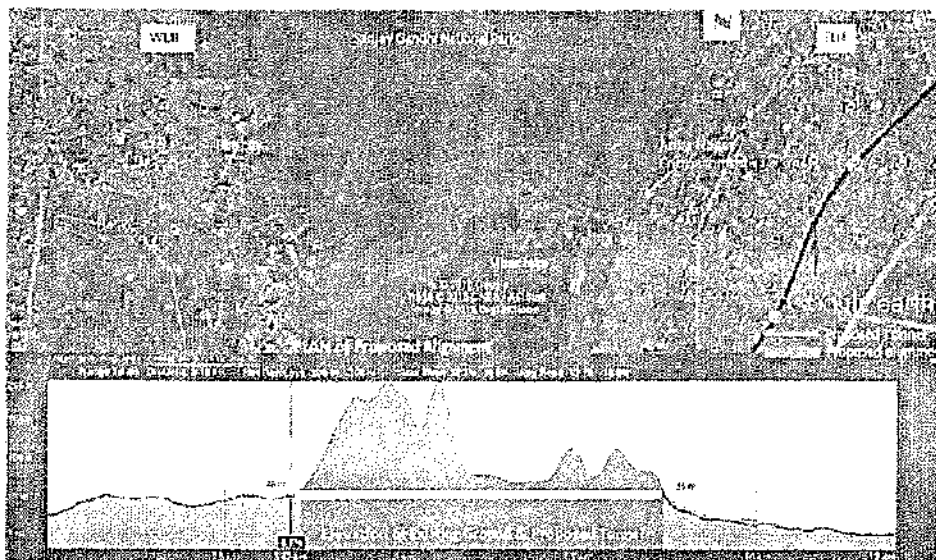
Detailed scope of work is as below:

- Finalization of suitable route from film city road to Khindipada junction
- Detailed design of final alignment
    - Horizontal Alignment
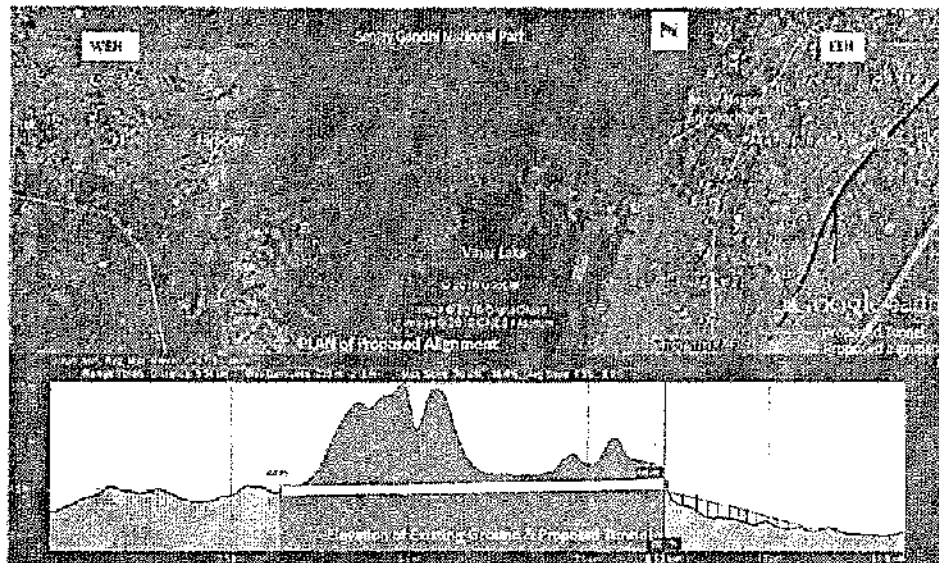   - Vertical Alignment

1.3 Suitable Alignment:-

The existing topography was explored for suitable alignments from Film city road to Khindipada junctions. Different options are summarized as below.

1.3.1 Option-1:-

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- This alignment is starts from Indira Gandhi Institute of Development Research (IGIDR) after 400m it takes left turn towards Sanjaya Gandhi National Parkthrough Amar Nagar Slum.
- As per the topography total tunnel length found to be 5130m.
- Lots of tress need to be cut for road work from IGIDR up to Tunnel portal.
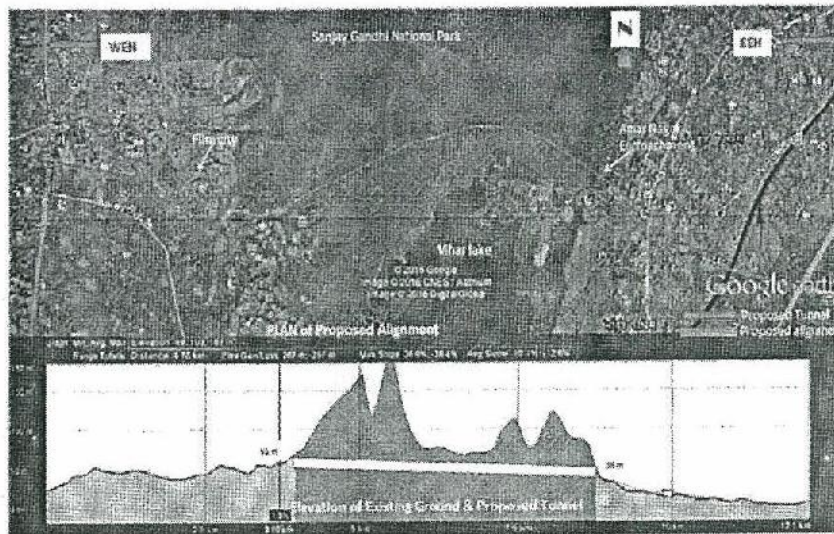- Amar Nagar slum to be vacated.

1.3.2 Option-2:

- This alignment starts from Indira Gandhi Institute of Development Research (IGIDR) after 400m it takes left turn towards Sanjaya Gandhi National Park and end at Kandipada Junction.
- As per the topography total tunnel length found to be 5240m.
- Lots of tress needs to be cut for road work from IGIDR up to Tunnel portal.
- One Viaduct of 150m length is provided to avoid Amar Nagar Slum. Hence no need to vacate the slum.
- Two sharp curves needed on this viaduct which may need speed restriction on viaduct.

PADECO

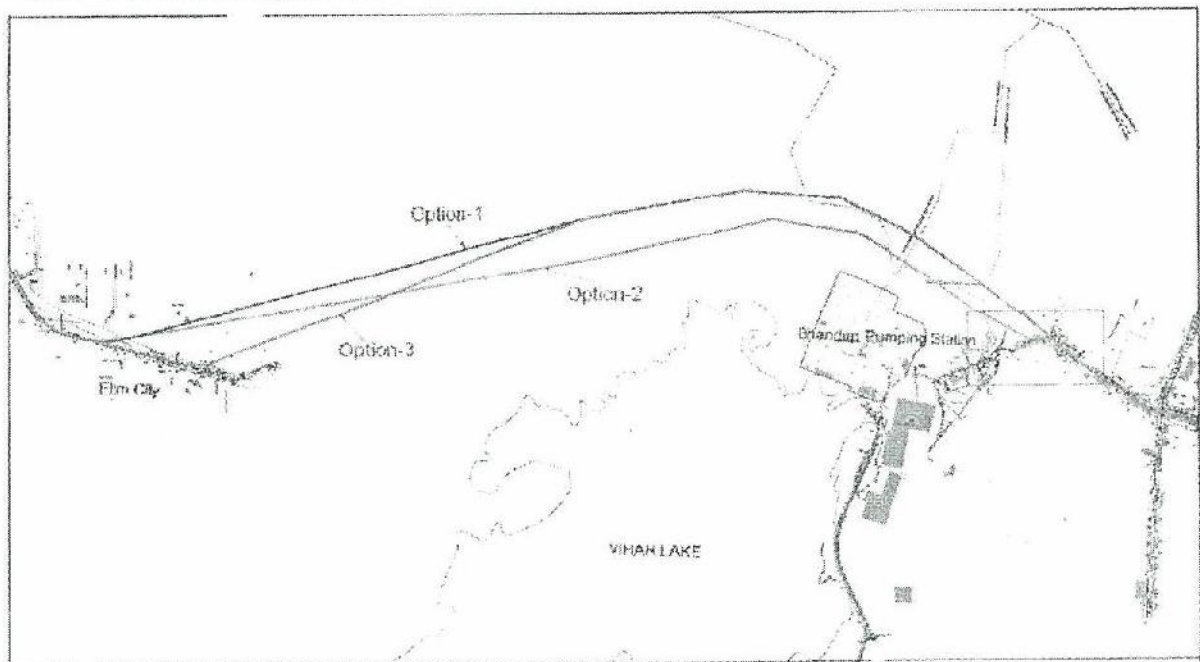| Option	Feasibility
Option 1 Length- 5130m	• This alignment is starts from Indira Gandhi Institute of Development Research (IGIDR) after 400m it takes left turn towards Sanjay Gandhi National Park through Amar Nagar Slum on Khindipada Side. • As per the topography total tunnel length found to be 5130m • Amar Nagar slum to be vacated.
Option 2 Length- 5240m	• This alignment starts from Indira Gandhi Institute of Development Research (IGIDR) after 400m it takes left turn towards Sanjay Gandhi National Park and end at Khindipada Junction. • As per the topography total tunnel length found to be 5240m. • Lots of trees needs to be cut for road work from IGIDRup to tunnel portal. • One Viaduct of 150m length is provided to avoid Amar Nagar Slum. hence no need to vacate the slum. • Two sharp curves need on this viaduct which may need speed restriction on viaduct.
Option 3 Length-4700m	• This alignment starts from Whistling Woods in Film City. It takes left towards Sanjay Gandhi National Park through Amar Nagar Slum. • As per the topography total tunnel length found to be 4700m. • In this option no speed restriction.

Chief Engineer
(C.T.I. & R.C.)

1.3.3 Option-3:

PLAN of Proposed Alignment

Elevation of Existing Ground & Proposed Tunnel

- This alignment is starts from Film Institute. It takes left towards Sanjaya Gandhi National Park through Amar Nagar Slum.
- As per the topography total tunnel length found to be 4700m.
- Less nosof tress need to be cut as compared to option-1 and option-2.
- Amar Nagar slum to be vacated.

1.3.4 All Three Alignments:

Above three options were explored and discussed with client MCGM. Option-3 was considered as suitable alignment due to following environmental and financial advantages:

- Less nos of tree cutting
- Minimum Tunnel length
- No additional viaduct is required
- No speed restriction is required

PADECO

Chief Engineer
(C.T.I. & R.C.)