

Parking Feasibility Analysis for Effective Jaipur Metro service

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Abstract— *this paper tends to the coordination of metro system and its practicality. The work expands a formerly created improvement display by thinking about upkeep assets. Movement in Jaipur has turned into an intense issue because of expanding number of vehicles on street. Growing number of vehicles results in traffic congestion and become a great problem in urban areas. In present scenario traffic jam is major problem and that can be solved by introducing a good public transport system so the main aim is to improve the public transport via metro system and it's respective.*

Keywords: *Metro networking, reduced traffic load, transportation*

1. INTRODUCTION

Jaipur is the most aristocratic place that is known for India, has mountains on consuming deserts sands, lakes, fortresses, and sanctuaries. Administered by numerous rulers, the city delineates history of respect and valor, riches and influence. The city draws in travelers from the whole way across the world for its Hawa Mahal, City Palace, Jantar Mantar and its rich social legacy. On another hand Jaipur contains populace of 3.07 million and that all requires a decent transportation. Alongside private transport, city transport additionally works and covers entire city, which makes voyaging simple and helpful [1] [2]. Sightseers likewise want to movement inside the city and close-by places through auto rickshaw, cycle rickshaw and taxicabs.

2. OBJECTIVE

The distinctive exercises that are probably going to happen to achieve the undertaking targets have been examined and the potential effects that may go with them have been talked about. This report tends to the accompanying to analyse elements to be considered in the loss of Jaipur metro. Explore people in general issues and issues related identified with open transport [3]. The options choices thinking about elective

areas, outlines, administration approaches, for determination of most possible and ecological worthy alternatives provides data on potential natural effects of the proposed subproject exercises with its extent, dispersion, and length.

3. COST ANALYSIS

The target of the money saving advantage investigation is to distinguish and evaluate the monetary advantages and expenses related with the undertaking (execution of 28.55 km of metro passageways in Jaipur), so as to choose the ideal arrangement alongside the financial suitability regarding its feasible speculation return potential [4]. The cost – advantage investigation is completed by utilizing the Discounted Cash Flow (DCF) strategy to acquire the financial interior rate of return (EIRR %) and monetary net present esteem (ENPV) for the proposed speculations connected with the task. Evaluated cost Rs 9,100 crore. The surveyed cost of the entire Metro Rail venture is Rs 9,100 crore. The cost Phase I is Rs 7850 crore what's more, for Phase II Rs 1250 crore have been assessed. The estimated length of the line arrange 2 is 23 km with around 18 km lifted and 5 km subway system The investigation was completed utilizing observation study, field visits, meeting with partners, survey of existing information, recognizable proof of unfriendly effects and post-venture natural checking. As the initial step, venture perusing exercise was attempted distinguishing the Parameters should have been mentioned and to layout the exercises for gathering information on every parameter. The exercises include being finding out of lawful necessities; Surveying of possibility contemplates main overview for distinguishing proof of major problem, information prerequisite and primary interview. Foremost first and optional information gathering, Discussion with partners

4. DATA COLLECTION

Data identifying with all parts of condition viz. physical, regular, and monetary condition both through basic and discretionary sources were assembled. The objective of data amassing was to give a database on existing conditions that can be used for suspecting the typical changes and for watching such changes. For preparation of it, the key pertinent information sources were laid out underneath. The planed E-W and N- S Corridors of JMRC wander is around approx 36 km long. The E-W Corridor is starting at now being executed and suggested as Phase 1 including the station from Badi Chopar to Mansarover while the N-S way is Phase 2 from Sitapura Industrial Area to Ambabari (Fig no.1 and Table no.1) The surmised length of this line is 23 km with around 18 km lifted and 5 km subway. In table no 2 there is briefly project structure to execute in various no planed station and railways line.

Table No.1 Station with Distance and Peak Passenger

Stations	Distance	Peak Passengers
Mansarover	0 km	2800
New Aatish Market	1.45 km	550
Vivek Vihar	2.56 km	600
Shyam Nagar	3.44 km	700
Ram Nagar	4.19 km	900
Civil Lines	5.3 km	1150
Railway Stations	6.82 km	4000
Sindhi Camp	8.07 km	4900
Chandpole	8.86 km	3500

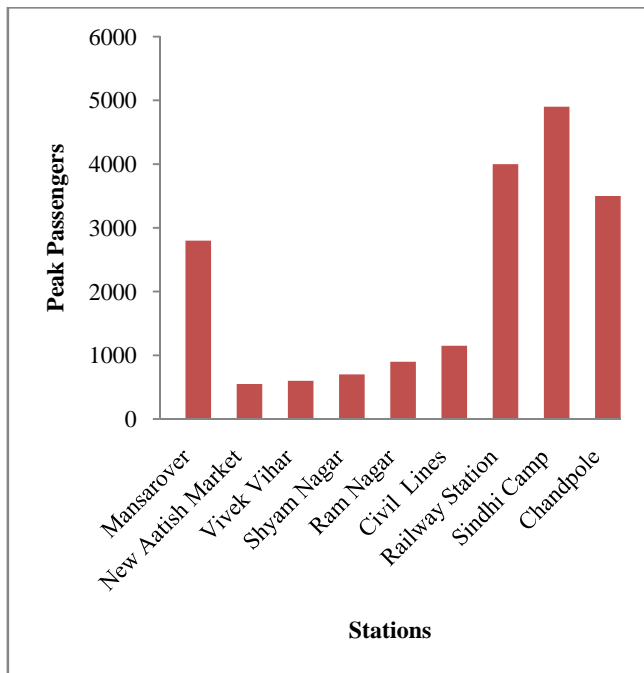


Figure No. 1: Relation between station and peak passengers

Table no. 2. Overview of Jaipur Metro Project

Government sector	Jaipur Metro Rail Corporation(JMRC)
Availability	Jaipur, Rajasthan, India
Type	Metro
Total no. of lines	1(running) 1(planed)
Stations	9(running) 22(planned)
Daily basis rider	19410

5. PARKING ANALYSIS

The parking is also a main feature for any project. It can also attract a huge amount of passengers, income and as well as a facility to passengers. Parking of metro provides its users a safe place to park their vehicles and also give them access to metro. The data regarding to metro parking capacity is presented here.

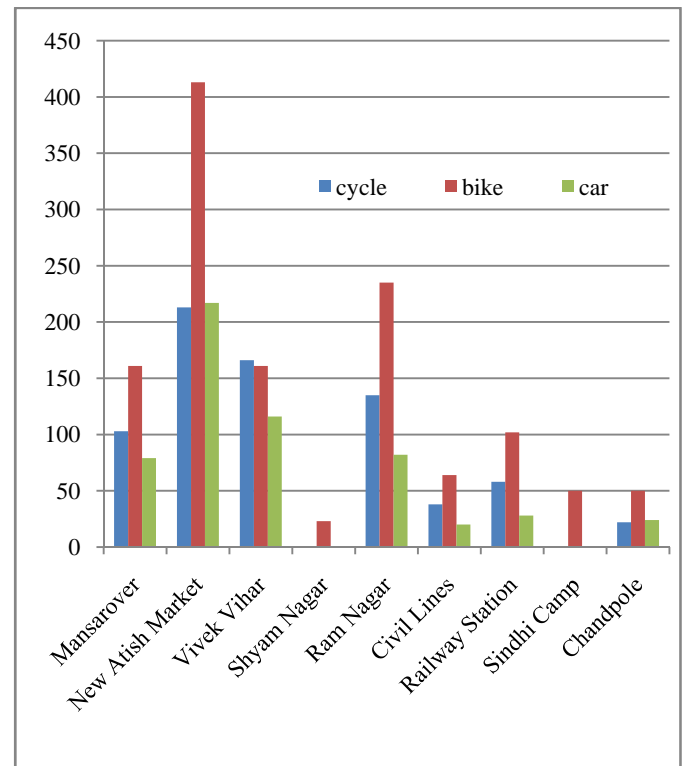


Figure No. 2: Relation between no. of different vehicle and stations

A). Advancement in Metro:

The Jaipur Metro came with some new technologies that can make the journey better than other modes of transport. In metro, the whole journey of train is displayed on a display and also shows the next and present station. The passengers also guided by an audio informatory system that aware the passengers for their destination. This all new technique makes a person that is unknown to routes, comfortable.

B) Key Issues:

By all those new features, metro is not standing well as it is dreamed. There are still many issues that are making it lower than other transport facility. There are following points the fare of Metro is more than other public transport. So people choose a low cost transportation. A normal person can get its bus on road while for travelling in a metro he have to go at two level above, that is time consuming. for a normal person feels it very complex so that they try to avoid it and chooses bus transport.(i)The travel time taken by metro and road transport is just similar or more for short distance. (ii)At intermediate stations like Ram Nagar, Shyam Nagar and others have good parking space but there is no security feature so a normal person hesitates to park his vehicle. And the parking is used by locals

C) Advancement needed:

The metro is giving its best in the service for its customer. But that is not making it to stand well. For the lifting up it in the market, it needs many new features that will make it advance from other modes of transportation. These could be following (i)The travel time of it should be reduced from other mode or transport or we can say it should be less time consuming.(ii)The complexity in metro system should be reduced. (iii)The live location and timing should be displayed on metro stations as well as at mobile app also, so that passengers should not have to waste his time in waiting.(iv)Various government activities should be organized that can attract passengers. For example there should be concession for students, ladies and senior citizens.

6. CONCLUSION

With the disentangling issues of metro wander, it would end up less difficult for the inhabitants and in addition for the guests to drive inside the city and near to places. The traverse of voyaging will be reduced hugely and the trek would be pleasing. All things considered, if the endeavor got enormous assistance from neighborhood people it will be recognized modernization of open transport and its ability to manage significant measure of voyagers. Totally E-W metro rail project have to provided the efficient and valuable road transport for easily accessible traffic flow for Jaipur city .apart of this to reduce the impact on physical problem exist in local traffic flow by all that things it could be enhancing the development of the business exercise and overall development of the city

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