



CITY LEVEL PROJECTS

PEDESTRIANISATION OF CONNAUGHT PLACE

Movement and Design





(An ISO 9001 : 2008 Certified Organisation)

Delhi Urban Art Commission

The Delhi Urban Art Commission was set up by an Act of Parliament in 1973 to “advise the Government of India in the matter of preserving, developing and maintaining the aesthetic quality of urban and environmental design within Delhi and to provide advice and guidance to any local body in respect of any project of building operations or engineering operations or any development proposal which affects or is like to affect the skyline or the aesthetic quality of the surroundings or any public amenity provided therein”.



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Preface



The city of Delhi, capital of this vast land of diversities, is a city laden with layers of history, a place where civilizations have lived, prospered and perished over centuries. The modern city today, built over and around a rich tapestry of heritage, presents an opportunity at every turn, to allow for coexistence of the past, present and the future. In order to understand this multidimensional urban spectrum and attempt to plan the future, various city level studies have been initiated by the DUAC. I hope that these studies will help the planners of modern day Delhi to carefully articulate urban space, structure, form and environment and sensitively address future requirements.

I convey my thanks to all the Consultants and Members of the Commission who have tirelessly worked on this research project to bring out this document. I also take this opportunity to place on record my sincere appreciation of the efforts of Secretary and other staff of DUAC for providing the necessary administrative support to make this happen.

I fondly hope that the authorities of the local, state and national government take these studies seriously and implement, in right earnest, the suggestions given herein.

January, 2018

Sd/-

Prof. Dr. P.S.N. Rao

Chairman, DUAC

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Summary

Modern day Connaught Place, not just forms the physical centre of the city of Delhi but is also a crucial cultural and commercial hub. It is one of the most iconic public spaces of Delhi, accommodating trade, commerce, recreation, leisure and daily living, forming a comfortable yet vibrant habitat. Conceptualized as a market for the elite British crowd showcasing formality and flamboyance unlike any given chaotic Indian market place, Connaught Place was designed in the lines of Nash's Regent Crescent, London and Royal Crescent, Bath, with airy, stuccoed colonnades, punctuated by Palladian archways enclosing the circus. It was desired to create an over arching harmony in the architecture of the space.

Over the years as accessibility to the site increased with the latest addition of metro; connectivity as well as overall congestion has increased in this area. Increasing number of showrooms of international brands and food joints attract consumers from all over the city and beyond. The central park, verandahs, and plazas of the inner circle form interesting meeting areas. The central location and availability for varied user groups makes it the ideal location for formal/informal meetings. Thus throughout the year CP experiences huge inflow of pedestrians and vehicles alike. Growing office spaces within the circus and in the surrounding areas further adds up to the floating population of this central business district.

Since 1990s the focus of development in CP has changed from infusing activities to regulation and reorganization of spaces with increasing need to control congestion in the area. The huge scale of Connaught Place creates issues related to cleanliness and maintenance of spaces which could otherwise be opened up for public interactions or utilities. Authorities and other stakeholders have started experiencing problems of excessive congestion due to surface parking both on-street and off-street.

DUAC was approached by NDMC to develop a proposal constituting design and policy interventions to facilitate pedestrianization within the circus. With the motive to make the area more vibrant and user friendly, it was proposed that the area should be studied keeping in mind aspects of circulation of vehicles with due importance given to goods, emergency and nonpolluting vehicles, pedestrian facilities and infrastructure and reorganisation of informal activities.

It was suggested that routes be delineated for emergency vehicles, nonpolluting vehicles such as golf carts or electronic shuttles with adequate parking, halting and drop-off zones such that universal accessibility is assured to all users of the precinct. Innovative transportation options needed to be looked into such as park and ride facilities, segway tracks and public bike sharing as attractive arrangements for independent movement in Connaught Place.

Planning is required to ensure a vibrant yet safe night life, easy and well regulated parking facilities ensuring seamless last mile connectivity, unhindered operation of service vehicle during off hours for to and fro movement of goods from the shops and overall decongestion. Important issues like rehabilitation of premises like petrol pump stations, motor service centres etc. need to be addressed. Policy level involvement is needed to create incentives for re-use of courtyards, regulated functioning of vendors and limited use of road space by private vehicles.

With the above concerns identified, a people oriented design approach was deemed to be best suited to reclaim Connaught Place for the general public, to provide each with equitable space for interaction. The proposals broadly discuss traffic management in the circle and landscaping of the newly reclaimed areas to create public space. Provisions have been given for premium parking, shuttle service connecting the circus to multi-level parking sites, sustainable mobility within the circus and other aspects of circulation. Landscaping ideas discussed in the project talks of creating activity spaces such as outdoor dining areas, open exhibition spaces, play area/ tot lot, play fountain plaza, etc for the visitors.

Extreme weather conditions of Delhi were a major consideration for the new design options. The challenge was to create a comfortable habitat for the visitors and encourage them to walk around the area. Tensile structure for AI -fresco sitting, fountain/ water body to act as humidifiers and public attractions and other landscaping features have been incorporated in the master scheme of design.

1.1 About the Site

Connaught Circus, fondly called “CP”, practically forms the City Centre of NCT, Delhi. Areas located on its North, South, East and West are prominently distinguishable from each other and are also referred to as such. It is surrounded by organic dense developments of Old Delhi and Paharganj on the north and the poshest area of Delhi that of Lutyen’s Bungalow Zones, to the south.

Built as a commercial hub by the British it continues to function as one of the most vibrant recreational and institutional space attracting local, regional and international visitors through out the year. The built form of CP is in the form of two concentric rings of commercial property enclosing a central park which also functions as the access node while travelling by metro or light passenger vehicles. The architectural character of the space is predominantly of the Georgian English type.

Connaught Place, due to its location and connectivity by different modes as well as spatial characteristics, acts as a hub for various facets of life in Delhi.

The five National Highways servicing the National Capital Territory of Delhi converge towards Connaught Place as it is located at the physical as well as activity centre of the city.

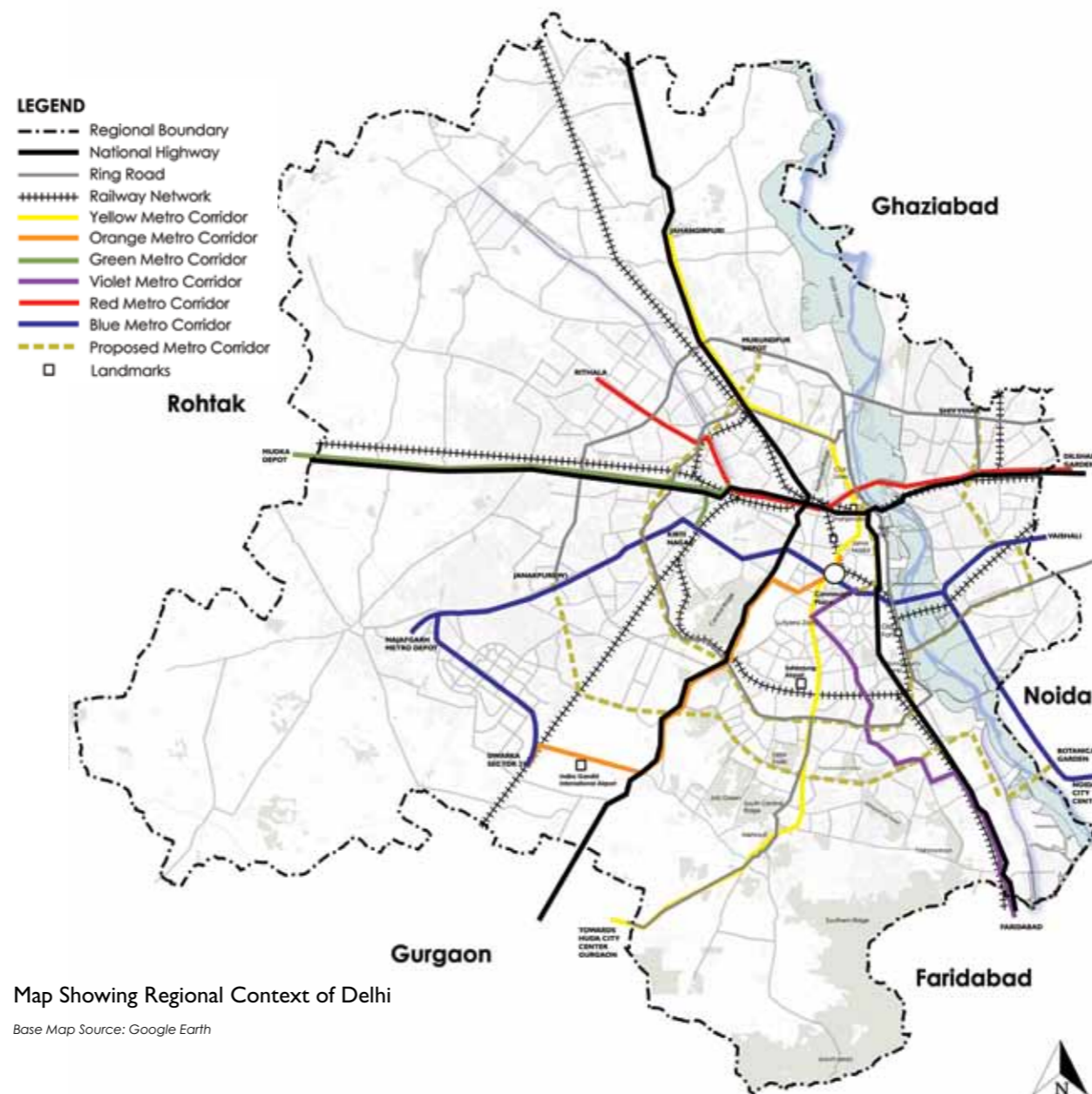
Connaught Place was earlier meant to house the New Railway Station but due to feasibility concerns, the same was developed on its periphery. Close proximity of New Delhi Railway Station gives direct access to Connaught Place from suburban areas via Ring rail as well as local trains from National Capital Region. Out of the 17 routes being operated for suburban connectivity apart from the ring rail, 11 routes pass through New Delhi Railway Station.

The busiest metro station on DMRC network, ‘Rajiv Chowk’ with 5 lakh passengers using it every day is located below the Central Park inside CP. Rajiv Chowk metro station is an interchange between blue and yellow lines which connect Noida and Gurgaon respectively. Shivaji Stadium metro station at periphery of Connaught Place, connects CP to the international terminal of Indira Gandhi International Airport via an express metro service.

Hence, Connaught Place is not only well connected to entire NCT, but boasts of good linkages to exterior districts of the National Capital Region as well.

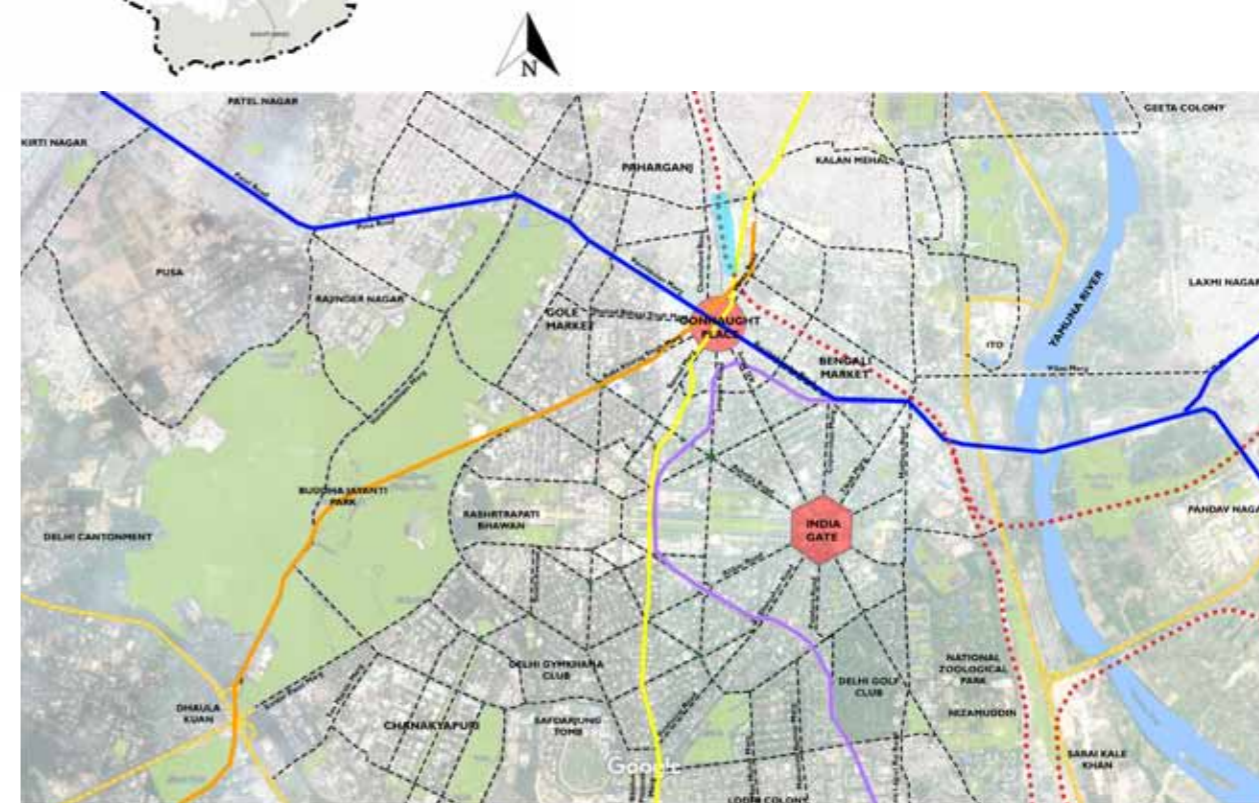
All roads leading up to Connaught Place are significant in terms of linkage as well as location of buildings of national and state level importance. This can be best observed by looking at each road individually as the radial geometry provides multiple connectivity alternatives for the incoming and outgoing traffic.

- Barakhamba Road connects CP to the Mandi House roundabout, which is the cultural centre of Delhi where many auditoriums, art schools, and cultural institutes are located. The iconic Statesman House is located on Barakhamba road along with numerous high end office buildings as well as the famous Modern School.
- Next clockwise is Kasturba Gandhi Marg which connects CP to the India Gate Hexagon and Rajpath. KG Marg provides connectivity to Agrasen ki Baoli - ASI protected, and houses offices as well as hotels.
- Further ahead on outer circle is Janpath which leads to Aurobindo Marg that cuts through South Delhi. Earlier one of the most educationally and culturally important streets in Delhi, it is now home to the Eastern and Western courts, the National Archives, IGNC and the National Museum and is popularly associated with street shopping on Janpath lane.



Map Showing Regional Context of Delhi

Base Map Source: Google Earth



Map Showing Connectivity of Connaught Place to Surroundings

Base Map Source: Google Earth

- Next is Sansad Marg or Parliament Street. It has the Indian Parliament and Connaught Place as its two terminal points. The Reserve Bank of India as well as the medieval astronomical ‘observatory’ the Jantar Mantar are situated here.
- After Sansad Marg lies Baba Kharak Singh Marg where many state emporiums are located. The Emporium complex has been redeveloped and plays host to various festivals including the popular Delhi Food Festival. Hanuman Mandir on BKS Marg draws visitors from NCT Delhi as well as its satellite towns on Tuesdays and weekends. Bangla Sahib Gurudwara is another highly revered worship centre that draws crowds. Recently developed DLF Capitol Complex, located between Hanuman Mandir and Shivaji Stadium Metro Station is a mechanized multi-level car park with high end car showrooms which has been designed in consonance with the façade famously associated with CP.
- Panchkuian Road connects the old market of Paharganj to CP and is used by traffic from northern as well as north western part of NCT to reach CP. It used to house a furniture market that was recently relocated to decongest the road for through traffic.
- The last two major roads leading out of Connaught Place are Chelmsford road and Vivekananda Marg (popularly known as Minto road) leading to New Delhi Railway Station and to the railways land. Minto road also provides the primary access point for CP to traffic from east Delhi approaching from Vikas Marg.

1.2 Evolution of Connaught Place (CP)

1931



- Development of residential cum commercial centre
- Commercial centre developed for high end shopping for the elite class residing in nearby Lutyen's Bungalow Zone
- Provision of residences on the upper floors was to enable the shopkeepers to reside near their workplace

1950



- Post independence, the character of Connaught Circus began changing with the advent of informal vending in inner circle to cater to the relatively less affluent people who now had access to CP
- Commercial centre developed for high end shopping for the elite class residing in nearby Lutyen's Bungalow Zone
- Provision of residences on the upper floors was to enable the shopkeepers and their families to reside near their workplace

1980



- Temporary markets settled around CP at Janpath, Shankar and Yusufsarai Markets.
- Verandas were declared as public property and formalisation of temporary markets.
- With the addition of high rise buildings around CP skyline started changing
- High rise establishments around were mostly commercial
- CP and its extensions identified as one of the Central Business Districts and Metropolitan Business District Center in MPD 2021

2016



- Previously immobile section of population gets access to CP due to metro - School and college students and women and elderly from middle class families
- Face lift for commonwealth Games

1.3 Administrative Framework

There are multiple frameworks within which development and maintenance of Connaught Place takes place as it is a part of the NDMC area which is considered a seat of Union Government.

Master Plan of Delhi has identified CP and its Extension (including Janpath, Sansad Marg, Baba Kharag Singh Marg, Panchkuian Road, Barakhamba Road, Kasturba Gandhi Marg), Gole Market, Mandi House, Pragati Maidan, Indraprastha Estate) as one of three Metropolitan City Centres in NCT Delhi. The vision for these city centres as per MPD 2021 is "need to be seen in the light of the historical legacy of the precolonial and post-colonial capital cities of the so called old and new Delhi, are envisaged as a city level centre for shopping, entertainment, sociocultural and all other activities indicated in respect of District Centres".

A comprehensively planned and attractive built environment will therefore need to be conceptualized and implemented to develop these as unique centres and major attraction of the city, apart from their commercial and social value for the citizens."

Specifically for CP, MPD goes on to say "The development of the Metropolitan City Centre in harmony with the existing urban form of the classical Connaught Circus and multi-storeyed buildings in its extension is envisaged to bring in visual integration in the overall urban form. An integrated plan incorporating urban design, landscape, traffic and transportation schemes, safe pedestrian walkways, parking areas, recreational and cultural areas etc. is to be prepared for its development."

The recently notified zonal plan for Zone 'D' does not elaborate much on Connaught Place and reiterates the directives of MPD 2021.



Zonal Development Plan of 'Zone D'
(Source: Zonal Development Plan (Division) D, www.dda.org/planning)







For the commonwealth games held in Delhi in 2010, Connaught Place was identified as one of the crucial spaces to be given a face lift. The conceived redevelopment plan included facade restoration; surface area development including parking areas and public plaza; service corridor in middle circle - 1.2km long utility duct to house facilities like water supply line, fire fighting line, and telecom cables; and utility infrastructure - 20 public toilets and 5 garbage stations. The project was identified by NDMC and executed by a private developer through tender. Beginning with conception in 2004, the project reached completion in June 2013.

In 2016, under the Smart Cities Mission of Government of India, NDMC area was one of the 20 cities which were selected for funding and implementation of the submitted proposals. In NDMC proposal, one of the key projects identified was Pedestrianisation of Connaught Place and Khan Market. NDMC's Special Purpose Vehicle (SPV), namely, "New Delhi Municipal Council Smart City Limited", a public limited company wholly owned by NDMC, had been incorporated on 28th July, 2016.

2.1 Circulation : Vehicular and Pedestrian

Vehicular circulation within Connaught Circus is one-way in all three circles as well as the connecting radials. In the circles the direction of movement reverses alternatively as shown in the map. On outer circle, the movement of vehicles is punctuated intermittently for pedestrian crossing along with four locations where signalised cross movement of vehicles is permitted. There are no signals within CP directing vehicular movement. Due to congestion on outer circle, while travelling from different parts of the city people tend to use inner circle as throughfare to travel in the opposite direction.

There is a continuous pedestrian movement in CP all along the building edges as well as across radials and middle and inner circles. Central park, which is a pedestrian zone, can only be accessed by crossing inner circle where vehicles move at moderately good speed.

-  Vehicular Circulation
-  Pedestrian Circulation
-  Pedestrian Crossing- Table Top
-  Pedestrian Crossing- Signalised
-  Pedestrian Crossing- Grade separated (Subway)
-  Traffic Signal



Traffic movement on outer circle



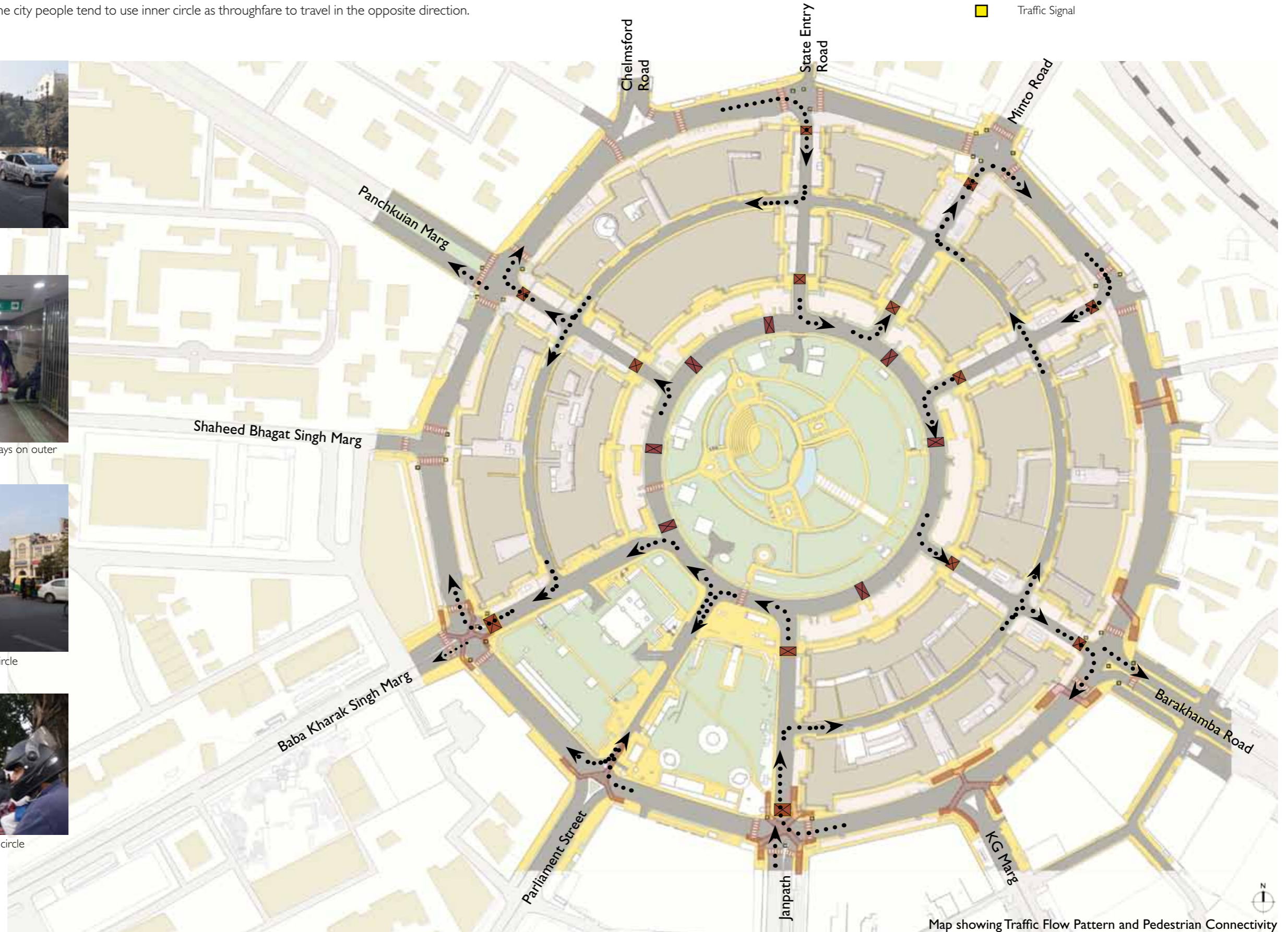
Well maintained grade separated subways on outer circle



Table top pedestrian crossing in inner circle



Signalised pedestrian crossing on outer circle



Map showing Traffic Flow Pattern and Pedestrian Connectivity

2.2 Infrastructure

2.2.1 Parking

Within Connaught Circus, surface parking was designed to overcome congestion. Well defined parking lots were provided on inner circle, radials, as well as outer circle. Capacity of these spaces have been mentioned in the table below from which it can be seen that the parking is now being used over and above the provision - 384 cars being parked in the middle circle without authorisation due to shortage of space. Apart from these lots there is an underground multilevel car park beside Palika Bazar called Palika Parking.

Within a radius of 300 mtrs of outer circle, there are two other multilevel car parks (MLCP) - DLF Capitol (mechanised) and Shivaji Stadium Parking and a small surface parking lot - Super bazaar; shown in the map below.

Parking Lot	Type Of Parking	Charges	Existing Capacity (ECS)	Current Status
Inner circle	Surface	20-100	462	462
Middle circle	Surface	20-100	0	384
Radial circle	Surface	20-100	436	436
Outer circle	Surface	20-100	403	403
TOTAL			1301	1685

(Source: Base Data- New Delhi Municipal Corporation)



Premium surface area used for parking - Inner circle



Palika Parking complex after revamp- less dingy

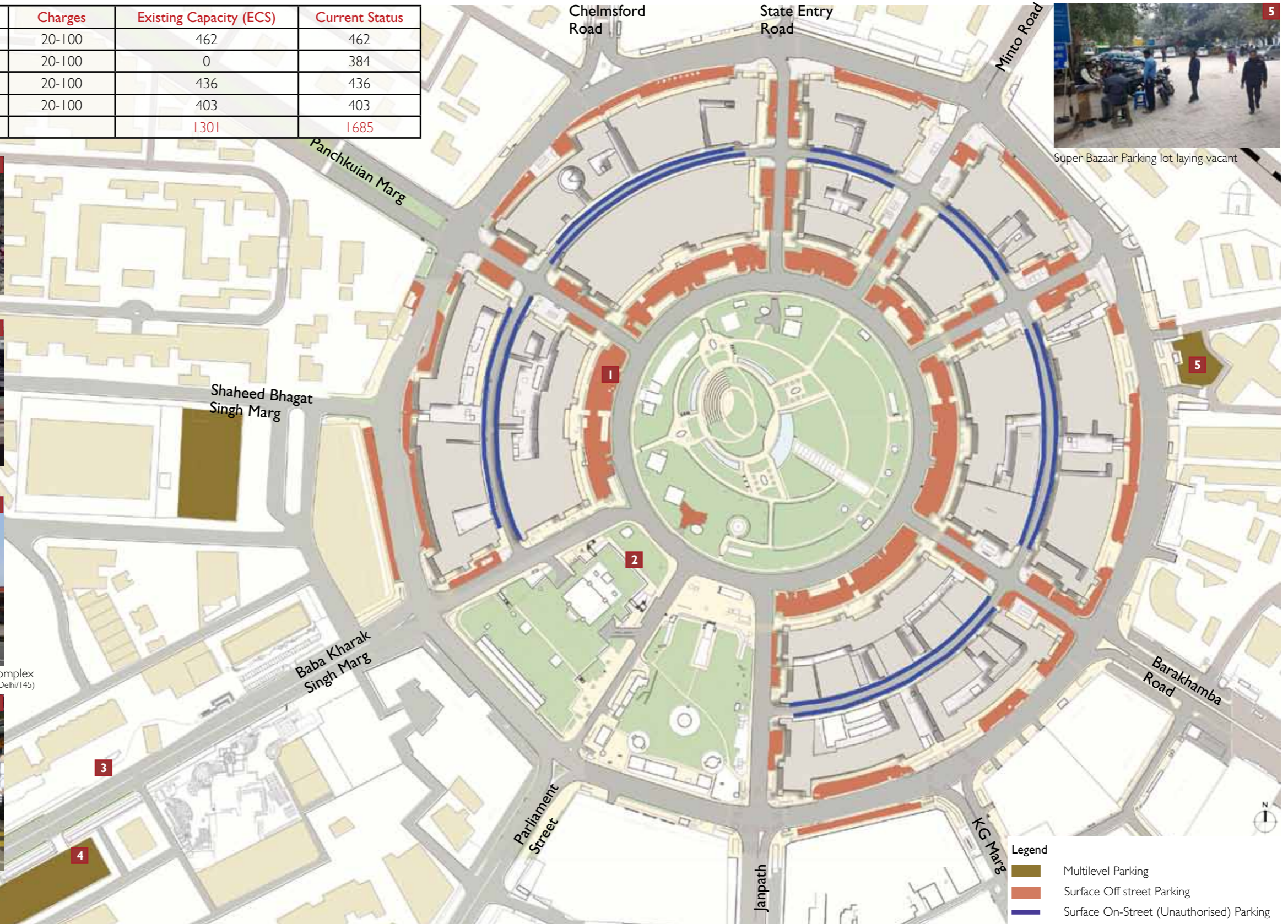


Well maintained and designed DLF Capitol parking complex
(Source: <https://www.zricks.com/DLF-Capitol-Point-Connaught-Place-New-Delhi/145>)



Mechanised parking in DLF Capitol Complex on Baba Kharag Singh Marg

Map showing Existing Parking Scenario



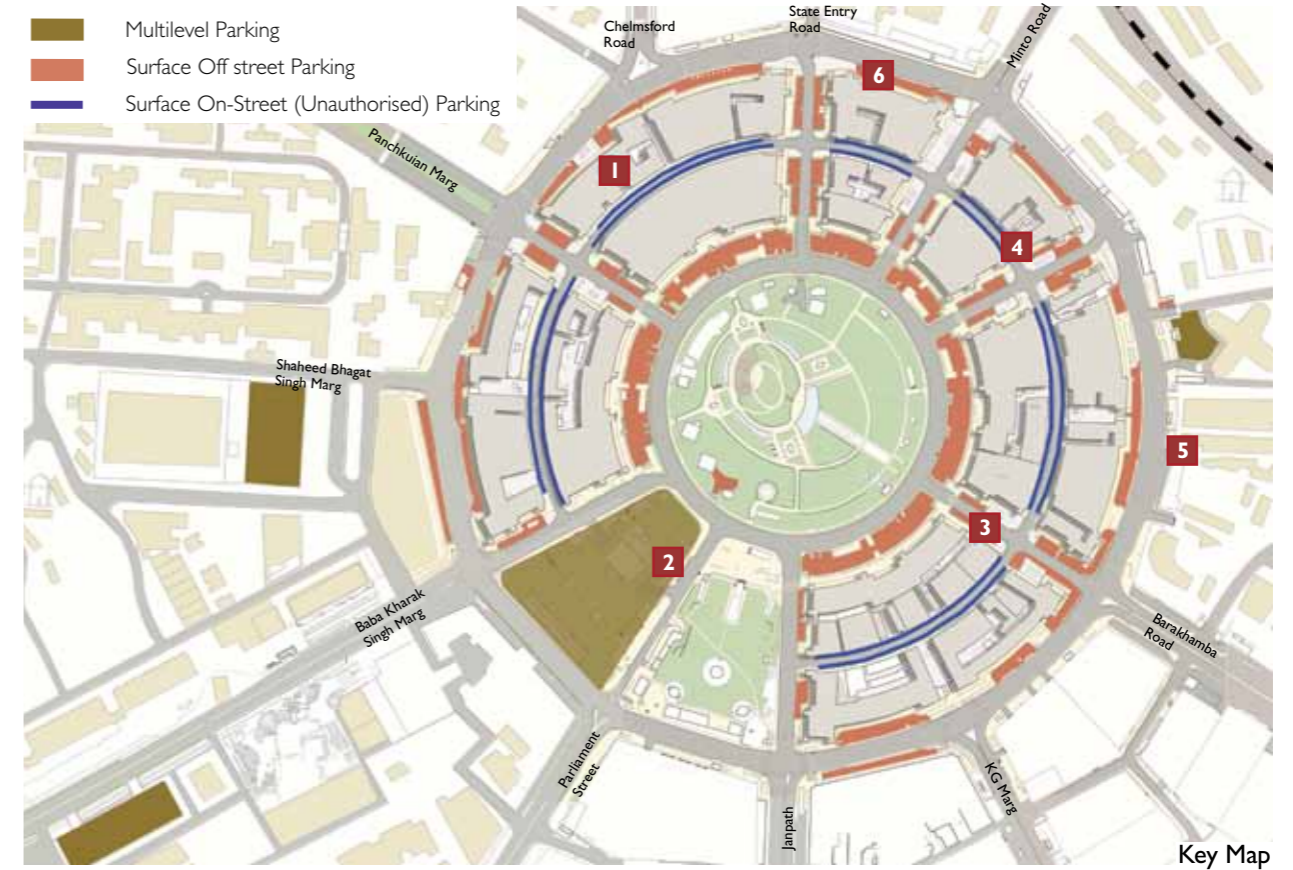
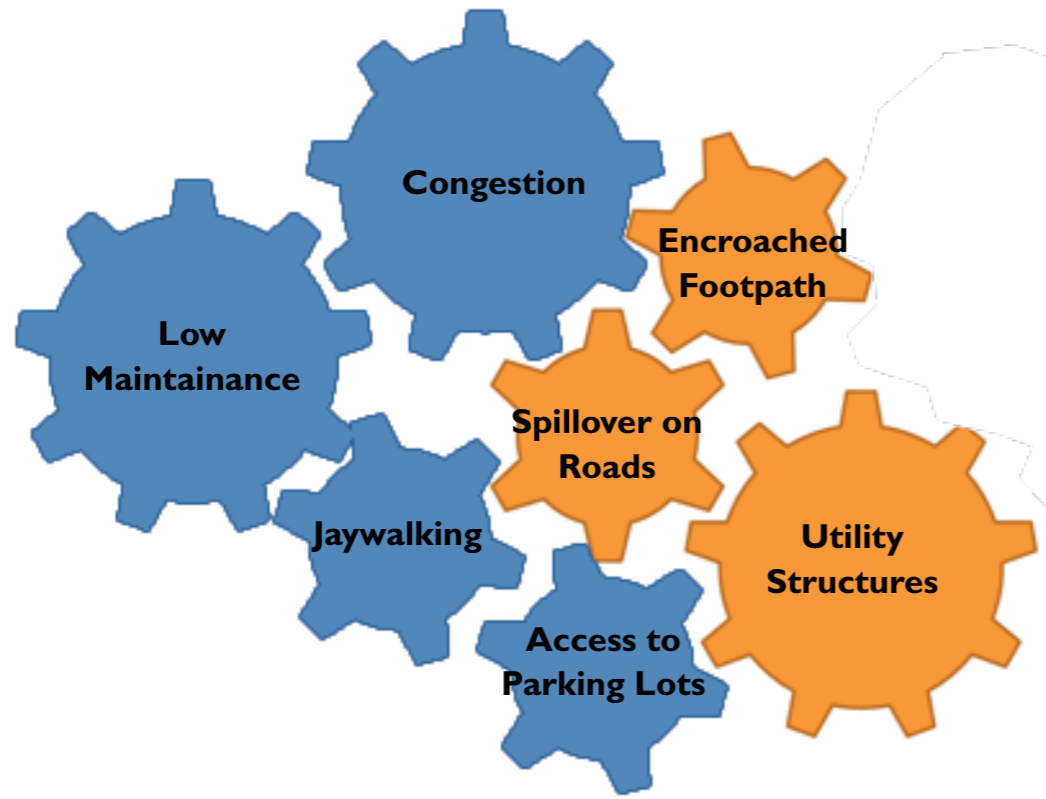
All the MLCPs are currently under utilised due to availability of more convenient surface parking both authorised and unauthorised. Poor accessibility of CP from MLCPs outside outer circle adds to the inconvenience of users.

Parking Lot	Type Of Parking	Charges	Existing Capacity (ECS)	Current Status
Palika Parking	MLCP		1016	250
Dlf Capitol	Mechanised MLCP	10 per hour	1408	300
Shivaji Stadium	MLCP		750	50
Super Bazar	Surface	20-100	50	50
TOTAL			3224	650



Super Bazaar Parking lot laying vacant

2.2.2 Parking : Issues



Issues related to Parking



Parking by residences and shop owners in middle circle courtyard and low maintenance of facade

Opinions and perceptions of 96 customers & Parking operators in CP regarding Pedestrianisation-

- 44% of car users anticipate a similar frequency of visiting CP if parking was removed
- Businesses overestimate the percentage of their customers who drive and underestimate those who use other modes;
- 70% of customers use metro;
- Customers who arrive by metro, on an average visit more frequently and spend more money than those who drive on a monthly basis;
- Approximately 35% of all surface off-street parking spaces are being occupied by employees of businesses;
- Parking occupancy is high but turnover is low



Existing non - functional/ unmaintained facilities in Palika parking complex



Pedestrian circulation blocked in outer circle by parked vehicles



Loading/Unloading and parking in the middle circle



Encroachment of footpath in outer circle by parked two wheelers



Parking on footpath at Super Bazaar leading to encroachment

The courtyards in middle circle are used for parking by shopkeepers and residents.

2.2.3 Public Transport Facilities

Connaught Place is well connected by public transport facilities

- Accessibility via bus is restricted to outer circle, that has a single bus stop near Super Bazaar, Barakhamba road
- Shivaji Bus Terminal is located near by on Shaheed Bhagar Singh Marg
- Bus stops are also located on the radials outside Connaught Circus
- Metro connectivity is via Rajiv Chowk metro Station located below Central Park, which forms the interchange for blue and yellow lines of Delhi Metro

Other modes that can be used to access CP include Three-wheelers and Cabs. A prepaid booth for autos is located near Palika Bazaar in Inner Circle. However, there is a high demand for autos all along inner circle for movement within CP as well as for commuting to nearby areas, resulting in their congregation near metro exits. Cabs, which have become the latest alternative for travel, require idling spaces between trips. For lack of planned provision for this requirement, idling of cabs in all parts of CP including inner circle, radials, and outer circle has become a major congestion factor.



Auto idling in Inner Circle near the metro exit points



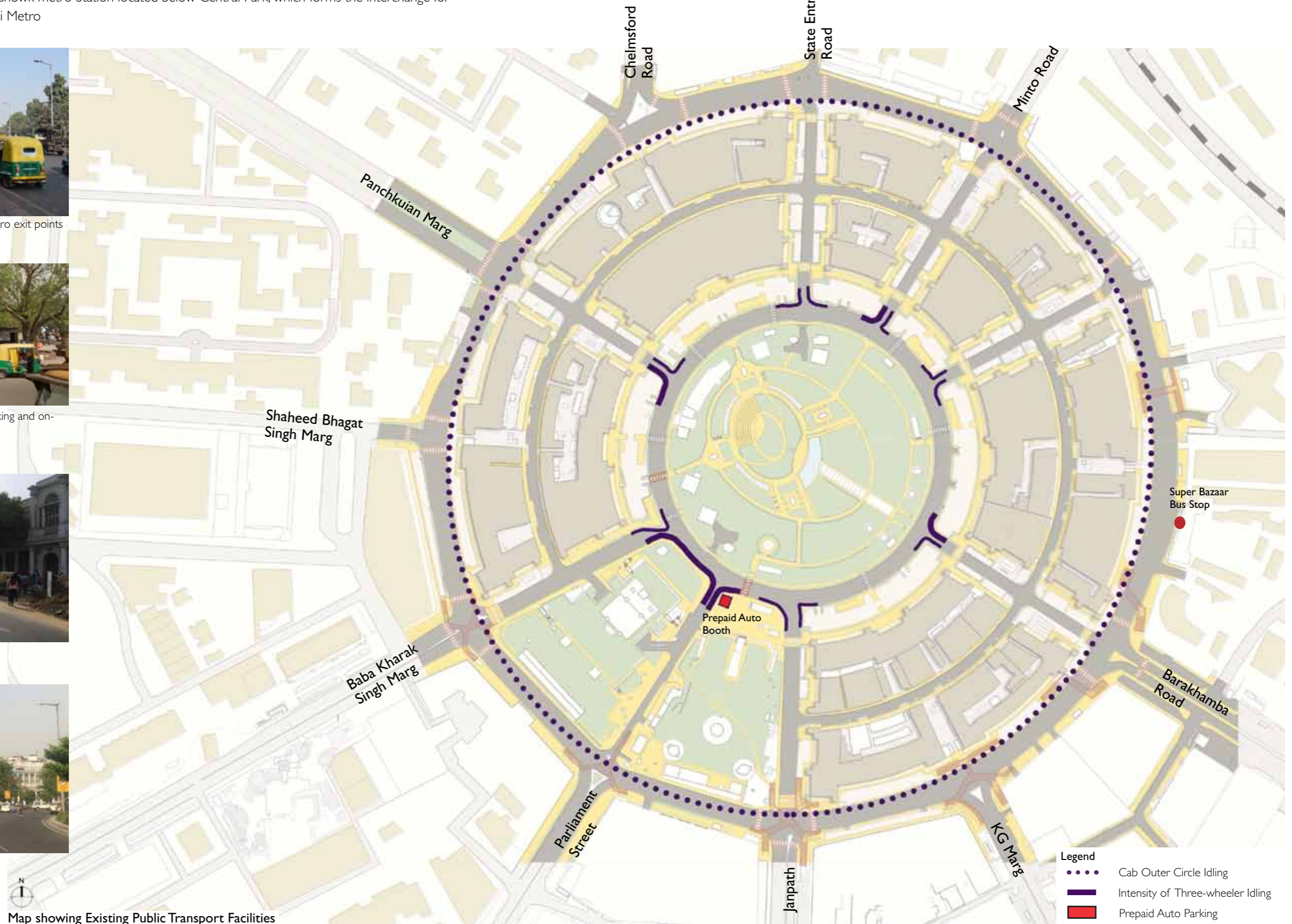
Cab idling on the radial near Palika Parking and on-street auto idling near prepaid booth



Three-wheeler idling in the radial



Cab idling in the inner circle



Map showing Existing Public Transport Facilities

2.2.4 Infrastructure : Pedestrian Facilities

Given the physical sprawl of CP and distribution of different activities in all the blocks instead of zoning of any kind, visitors to CP often end up walking considerable distances. For circulation along the blocks, there are covered walkways to provide respite from weather conditions. To facilitate movement from one block to another, all the radials have been equipped with table top crossings, and for crossing the high speed corridor on outer circle, seven pedestrian subways have been constructed out of which five are currently operational. However these subways are concentrated on half of outer circle as shown on the map. For the remaining intersections on outer circle, signalised pedestrian crossings have been provided.

Some of the shortfalls in provision of pedestrian infrastructure are -

- Footpath along inner circle (marked in red) on the map below
- Encroachment of footpath in middle circle by utility structures like dhalao and public toilets
- Comfortable & safe access to Central Park - Vehicles on inner circle travel at high speeds making the table top crossings irrelevant.

Some other issues experienced by pedestrians include encroachment of pedestrian pathways by hawkers and illegal parking and extreme weather conditions causing discomfort.



Auto idling in the Inner Circle near the metro exit points



Encroachment by street hawkers on the pedestrian pathway



Insufficient footpath on the middle circle blocked by the utilities



Visitors walking on road indicating lack of pedestrian pathway and crossing



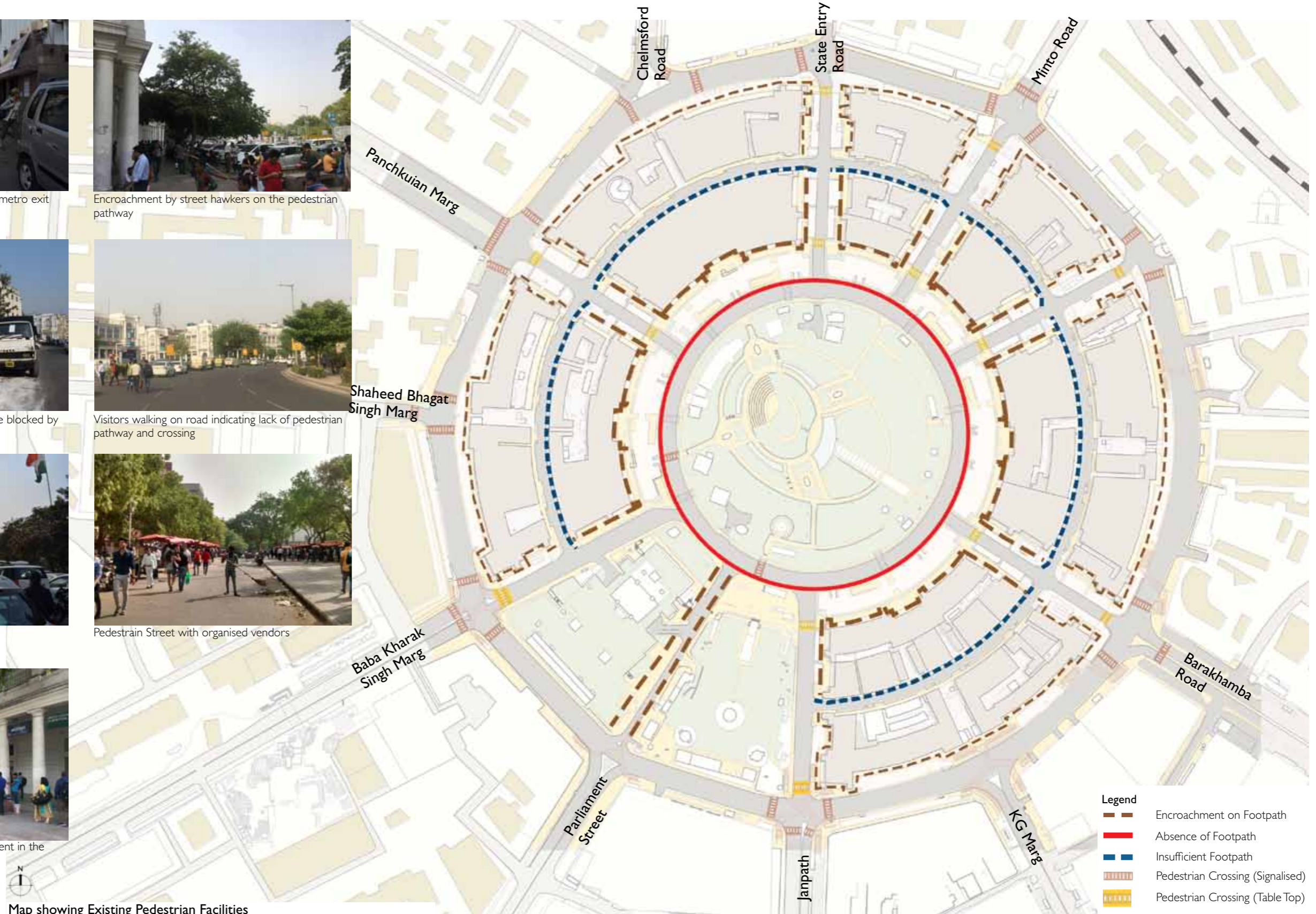
Auto idling in the radial



Pedestrian Street with organised vendors



Auto idling hindering the traffic movement in the inner circle



Map showing Existing Pedestrian Facilities

3.1 Global Overview

A global overview

World over car-free pedestrianisation of areas is popular and has been in existence for long. Germany takes the lead with the creation of a pedestrianised street in Essen city way back in the year 1929. By the year 1955, over 20 German cities pedestrianised parts of their urban areas.

There are more than 300 car-free zones around the world and the number is only increasing. In November 1962, Copenhagen's main street, **Strøget**, was pedestrianised and this initiated an urban transformation phenomenon. Today 80 per cent of all journeys in Copenhagen are made on foot, and 14 per cent by bicycle.

Car traffic in the city centre has been reduced significantly and congestion is no longer a problem. Similarly, in the 1970s the pedestrianisation of **Nuremberg** resulted in probably the first study directly linking the move with air quality. In Burgos (Spain), the city's historic centre was pedestrianised between 2006 and 2008 to reduce air pollution and protect city monuments, resulting in 30 per cent increase in the number of pedestrians and a remarkable 200 per cent increase in the number of cyclists.

Bogota in Colombia saw the creation of hundreds of km of pedestrian-only streets and plazas during Mayor Enrique Penalosa's first term from 1998 to 2001. The city now has the world's longest pedestrian street with 17-kmlong Alameda el Porvenir, which connects the city's low-income southwest district with public schools, libraries, and BRT stations.

The most iconic pedestrianisation project is in New York City where, in 2009, the city closed a portion of Broadway in **Times Square** to cars for use as a pedestrian plaza initially for six months and later made it permanent. Fatih Municipality proposed a pedestrianisation project to expand sustainable mobility and create a more accessible Historic Peninsula for Istanbul in Turkey in 2010. Since then, the municipality has pedestrianised 295 streets, benefiting roughly 2.5 million people who walk on the streets of the Historic Peninsula every day.

(Source: Amit Bhatt, Daily O, Connaught Place will thrive without cars, 2017)

Many other European cities followed this idea with success. During almost the same time, many cities in the US also adopted the same strategy. Most of the downtown shopping areas have been made car-free zones. Many streets in New York city, Boston, San Francisco, New Orleans and other cities have been made pedestrian-only streets. In Africa, and in Australia and South America too, there are several examples of successfully operating 'all pedestrian' streets.

Sai Yeong Choi Street in Hong Kong, Nanjing Road in Shanghai and Insadong Steet in Seoul are some popular examples in Asia. 'Hokosha Tengoku' or 'pedestrian heaven' in Japan is very popular.

Indian initiatives

In India, the **MG Road in Gangtok and the Mall Road in Shimla** have been very successful pedestrian streets. In Panjim, Goa, one of the main streets has been made a '**NoMoZo**' or 'no motor zone' for one day in the week.

Further, on certain days of the week, we have 'weekly baazars' on different days in different parts of Delhi. On these days, the streets become completely pedestrianised. For instance, the weekly bazaar in Bhogal or Sheikh Sarai is a very popular event for the citizens to visit and pick up traditional items at reasonable prices.

The **Central Market at Lajpat Nagar and the Sarojini Market, both in Delhi**, are other examples of pedestrianisation, although it may not be entirely a pleasant experience. Initiatives by the community such as 'Raahgiri' have attempted to give back the street space to pedestrians.

Pedestrianisation can be achieved in several ways. At one extreme is making an entire street or area completely pedestrianised and at the other is making it a 'no car' zone on certain days of the week or at certain times of the day. This way, depending on the nature and intensity of the problem as well as other local conditions, one can evolve the strategy. However, sometimes, while it could be made a 'no motor' zone, one may permit battery operated cabs, bicycles and so on for the movement of the elderly. In fact, the concept of shopping in district centres (such as Nehru Place in Delhi) and community centres is also a type of pedestrianisation where the cars are all left at one central place and one walks around an area to do shopping. These have now graduated into airconditioned shopping malls, a more sophisticated form of pedestrianisation!

Economics

When Times Square in New York was proposed to be closed for cars, traders thought they would lose business. However, just one year after the launch of the project, only 15 per cent of the retail managers perceived any negative impact on their store's ability to conduct business. Data showed that the number of people walking on the closed street went up by 11 per cent and the pedestrian volume rose by six per cent in the first year alone, due to which the project soon garnered much support from traders. This trend is not only confined to New York or Western cities.

A similar experience was seen in India, when Raahgiri Day was started in Gurugram. The closure of main streets for few hours on Sunday has shown positive impact on businesses around the area. In fact, a study by WRI India after one year of organising Raahgiri Day in Connaught Place, showed that 89 per cent of business establishments surveyed supported the closure of inner circle on Sundays.

Over 24 per cent supported the concept due to increase in sales and 60 per cent due to revival of CP on Sundays.

Implementation

Cities need to put focus back on people instead of vehicles because while mobility is important for economic development, unsustainable mobility can lead to degradation in urban areas due to increased vehicle emissions, decreased safety and serious marginalisation.

Pedestrianisation can have a significant positive impact on urban centres by provoking changes in the characteristics of traffic flow and usage pattern, but it is not an easy task. Even the Times Square pedestrianisation, which is a global success story today, failed to take off in the 1960s and the '70s.

Similarly, the CP pedestrianisation project is a two-decade-old conversation but is only seeing the light of day today — hopefully. Successful implementation will not only transform CP but also reinforce the logic of planning away from vehicles.

3.2 International Best Practices - Pedestrian Cities

Designing great places for the comfort and enjoyment of the pedestrian is one of the most important aspects of New Urbanism. Taken to the highest level of urbanism, the finest places in the world are cities with entire networks of car-free streets, known as pedestrian cities.

Pedestrian cities are growing in popularity in many top regions around the world. The incredible beauty, enjoyment, and convenience a network of connected pedestrian streets and squares provides to the residents on a daily basis is unsurpassed. Being able to walk to a mix of shops, restaurants, newsstands, coffeehouses and open-air markets within car-free neighborhoods and work centers delivers the highest quality of life, and adds great variety and vitality to an area. Jane Jacobs calls this "an intricate and close-grained diversity of uses that give each other constant mutual support, both economically and socially." There is a growing demand for entire city districts to be made pedestrian, and directly connected to a train line.

Venice, Italy is considered the greatest pedestrian city in the world because it contains the largest pedestrian street network completely free of cars. The entire city has no cars operating on its streets. The city is quite dense, yet the most relaxing and pleasant city in the world.

Copenhagen is another of the world's great pedestrian cities. A recent issue of 'Metropolis' magazine talks about Copenhagen and its growing pedestrian street network. Although it's blessed with certain inherited characteristics - such as a narrow medieval street grid - the city has worked steadily to improve the quality of its street life. In the 40 years since Copenhagen's main street was turned into a pedestrian thoroughfare, city planners have taken numerous small steps to transform the city from a car-oriented place to a people-friendly one. "In Copenhagen, we have pioneered a method of systematically studying and recording people in the city," says Jan Gehl, a Danish architect and co-author of 'Public Spaces-Public Life', a study on what makes the city's urban spaces work. "After twenty years of research, we've been able to prove that these steps have created four times more public life."

SOURCE: <http://www.newurbanism.org>



Panepistimiou street before and after its proposed pedestrianization in the 1983 Master Plan

Source: <http://www.athenssocialatlas.gr/en/article/pedestrianization-in-athens/>

Copenhagen's 10-Step Program

1. *Convert streets into pedestrian thoroughfares* - The city turned its traditional main street, Stroget, into a pedestrian thoroughfare in 1962. In succeeding decades they gradually added more pedestrian-only streets, linking them to pedestrian-priority streets, where walkers and cyclists have right-of-way but cars are allowed at low speeds.
2. *Reduce traffic and parking gradually* - To keep traffic volume stable, the city reduced the number of cars in the city center by eliminating parking spaces at a rate of 2-3 percent per year. Between 1986 and 1996 the city eliminated about 600 spaces.
3. *Turn parking lots into public squares* - The act of creating pedestrian streets freed up parking lots, enabling the city to transform them into public squares.
4. *Keep scale dense and low* - Low-rise, densely spaced buildings allow breezes to pass over them, making the city center milder and less windy than the rest of Copenhagen.
5. *Honor the human scale* - The city's modest scale and street grid make walking a pleasant experience; its historic buildings, with their stoops, awnings, and doorways, provide people with impromptu places to stand and sit.
6. *Populate the core* - More than 6,800 residents now live in the city center. They've eliminated their dependence on cars, and at night their lighted windows give visiting pedestrians a feeling of safety.
7. *Encourage student living* - Students who commute to school on bicycles don't add to traffic congestion; on the contrary, their active presence, day and night, animates the city.
8. *Adapt the cityscape to changing seasons* - Outdoor cafes, public squares, and street performers attract thousands in the summer; skating rinks, heated benches, and gaslit heaters on street corners make winters in the city center enjoyable.
9. *Promote cycling as a major mode of transportation* - The city established new bike lanes and extended existing ones. They placed bike crossings - using space freed up by the elimination of parking - near intersections. Currently 34 percent of Copenhageners who work in the city bicycle to their jobs.
10. *Make bicycles available* - The city introduced the City Bike system in 1995, which allows anyone to borrow a bike from stands around the city for a small coin deposit. When finished, they simply leave them at any one of the 110 bike stands located around the city center and their money is refunded.

Quality of life

New Urbanism is creating and restoring walkable, diverse, compact towns and cities that enable a higher quality of life by offering new choices for living.

Pedestrian Friendly Urban Places

This is the highest quality environment possible for living. It includes a full range of services within a 5-10 minute walk of every residence. At minimum, this would include grocery stores, deli's, bakeries, newsstands, coffeehouses, vegetable stands, open-air markets, personal services, parks, and green spaces. A full range of entertainment and cultural activities are also desirable, all in an attractive, friendly atmosphere.

European cities are some of the finest examples of pedestrian friendly living forms. Venice is the best example of this because cars were never allowed to enter the city - the entire city is composed of all pedestrian streets. Venice also has the most complete, most varied and beautiful continuous urban fabric. Each neighbourhood has its own central square or campo that acts as it's heart and soul. These are within walking distance of all the residents, and offer a full range of services as well as social interactions.

Cities and Towns as works of Art

The combination of beautiful architecture with great urbanism creates the most beautiful places to live, places that express a life of richness and tradition, and act as a comfortable stage for the drama of life.

Places free from danger and toxins

An environment offering a high quality of life is a place free from noise, pollution, toxins, radiation, and danger. This includes safe streets everyone can walk along, clean air to breathe, clean and healthy water and food.

A Safe, comfortable, and efficient transportation system

An integral part of a high quality environment is a quality transportation system that everyone can use to easily get around locally and regionally.

SOURCE: <http://www.newurbanism.org>

3.2.1 PEDESTRIANISATION IN HONG KONG

I. Introduction

In order to meet the public need for improving the overall pedestrian environment, Transport Department is following an environmentally friendly approach in managing traffic and transport matters and is committed to putting more emphasis on the interests of pedestrians. Since year 2000, Transport Department has been implementing pedestrian schemes in several areas, including Causeway Bay, Central, Wan Chai, Mong Kok, Tsim Sha Tsui, Jordan, Sham Shui Po, Stanley and Shek Wu Hui with the following objectives:

- To improve pedestrian safety and mobility
- To promote walking as a transport mode
- To discourage access for non-essential vehicles
- To improve overall pedestrian environment

2.Types of Pedestrian Schemes

Pedestrian schemes include the following types:

(I) Full-time Pedestrian Street

In full-time pedestrian streets, pedestrians have absolute priority. Vehicular access is restricted to emergency services only but service vehicles may be allowed in specific period, for selected locations.

(II) Part-time Pedestrian Street

In part-time pedestrian streets, vehicular access is only allowed in specific periods. In order to minimize vehicular access to the area, there is no on-street parking space. However, loading bays are provided for loading and unloading purposes.

(III) Traffic Calming Street

In traffic calming streets, footpaths are normally widened and on-street parking spaces are reduced as far as possible. Taxi stands and green minibus stands are only provided if relocation is not practical. There is no restriction to vehicular access. However, vehicles are slowed down through the use of traffic calming measures, such as speed tables, kerb build-outs, sharpened corners, road narrowing, gateways, etc

3. Factors considered in developing a pedestrian scheme:

Pedestrian capacity and safety of the existing footways.
Public demand and land use, e.g. are there shops or places of interest which would attract pedestrian flow?
Impact of pedestrianisation on the local traffic and the access and loading/unloading activities of the buildings in the vicinity.
Whilst pedestrianisation is desirable from pedestrian and environment standpoint, it is imperative that the design of any pedestrian scheme would not create serious traffic problems on other roads in the vicinity. Otherwise it would only be shifting traffic and environmental problems from one location to another without net gain to the community.

SOURCE: http://www.td.gov.hk/en/transport_in_hong_kong/pedestrianisation



Sai Yeung Choi Street South(Before)
Photo taken in March 2000



Sai Yeung Choi Street South(After) Part-time Pedestrian Street
Photo taken in May 2005



Narrow Footpath at Johnston Road outside Lun Mun Restaurant (Before) (Photo taken in January 2001)



Footpath Widening at Johnston Road outside Lun Mun Restaurant (After) (Photo taken in December 2003)



3.2.2 PEDESTRIANISATION OF TIMES SQUARE

The centrepiece of Janette Sadik-Khan, the former transportation commissioner of New York City, vision was Times Square—the congested, grandiose mash up of streets that likes to call itself the crossroads of the world. In 2009, a plan was crafted to re-configure the area so it became less a conduit for cars than a playground for human beings, where people could see and be seen, eat, rest, shop, and take zillions of selfies.

There was widespread scepticism before the Times Square plaza was implemented as a pilot program: the status quo felt pretty uncomfortable with the idea that the crossroads of the world belonged to people, rather than taxis. But the place turned out to be insanely popular. Crowds of people who had been jammed onto the narrow sidewalks now had room to move, and they happily filled that space.

Times Square’s Transformation Into A Pedestrian-Friendly Tourist Fun Zone Is Complete

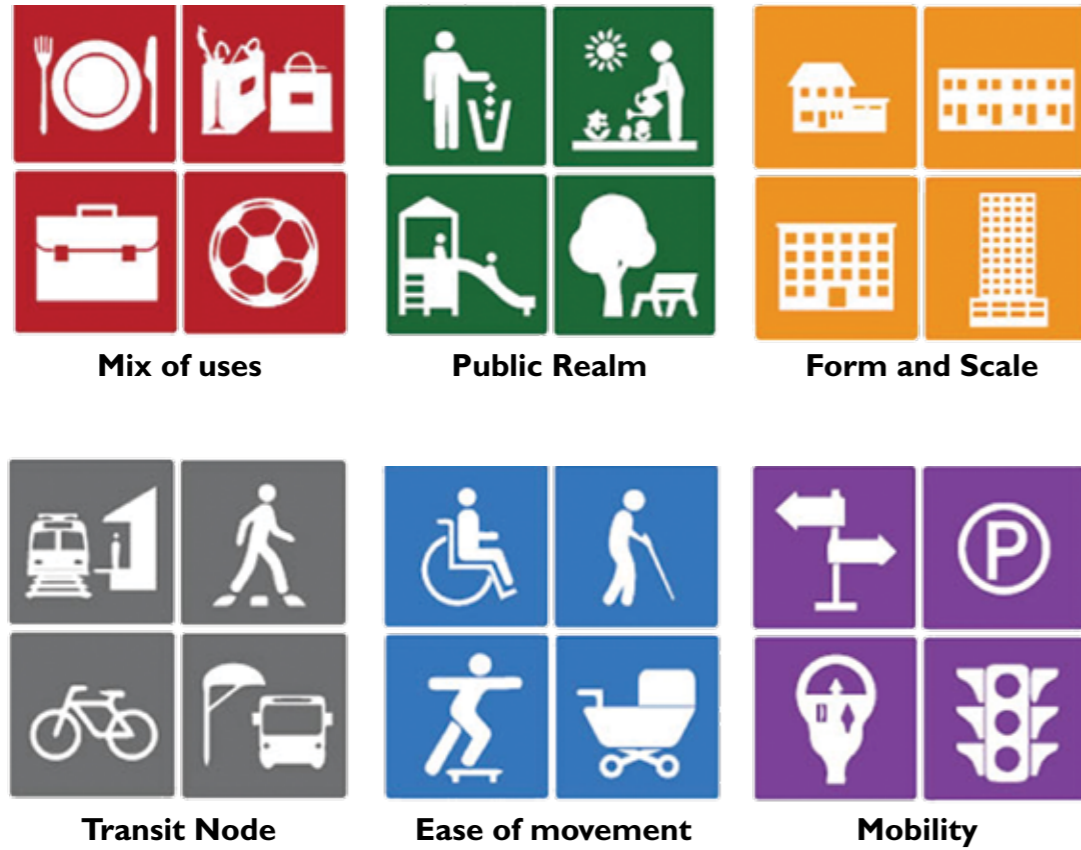
SOURCE: <https://www.citylab.com/transportation/2015/08/a-national-model-for-better-streets-is-suddenly-at-risk/402129/>



Times Square in New York City being a great example of public space - 4 years ago it was transformed into a pedestrian boulevard

3.3 Design Strategy

Pedestrian streets, squares and plazas provide a vehicle-free environment in highly congested areas. They are common in overseas cities, particularly in central areas, shopping areas and also tourist destinations. Pedestrian streets can become attractive and lively areas, where people can enjoy street entertainment, street cafes and social interaction.



Advantages of pedestrianisation

The need for pedestrianisation arises from several quarters.

- Too many cars on streets increases the requirement for parking.
- With a large number of cars parked close to shops, there is little space for the 'shopping experience'.
- This also leaves little space for pedestrians to walk comfortably.
- A fully pedestrian space actually becomes a civic place to experience, to hang around, to socialise.
- Plazas become spaces for leisure walking and 'taking the city in'. They also function as a common space for the young and old alike to entertain themselves.
- Informal sector and traditional crafts get exposure to the markets.
- Provide a space for inclusion, for all kinds of people to mix
- Advantages of pedestrianisation are also in terms of safety, low levels of noise, decreased air pollution due to vehicles, and an overall aesthetic experience of leisure and life.

Connaught Place offers a unique experience in Delhi, NCR. While shop owners do a lot of 'window dressing', shoppers mostly do not have the space to stand back and take in the experience. In the case of Connaught Place, despite the fact that there is a metro station right in the centre and others close by on the outer edge; despite the fact that there is a two level car parking at Palika and a multi-level mechanised car parking at Baba Karak Singh Marg; there are a few thousand cars parked in the inner and outer circles every day. The overwhelming presence of the cars makes it very difficult for the shoppers. The taking out of these cars, calls for more car parking lots in close proximity. Further, after parking, reaching the inner circle in a safe, convenient and comfortable manner is also very important. While all the imperatives mentioned above are applicable in CP, the 'Dil' of Delhi, it needs very carefully thought out interventions to make it happen.

(Source: P S N Rao, TOI, One way to avoid several hassles, 2017)



Alleviation of concerns raised by stakeholders

Arguments Opposing Pedestrianisation	Rationale for Pedestrianisation
INNER CIRCLE	
Scale- Too big for elderly and Children to navigate	Provision of small electric vehicles for mobility within CP and access to parking lots
Difficulty to shoppers carrying personal items	
Lesser crowd : Small entrepreneurs lose business	Realty experts welcomed the announcement as a "much-needed move" and said that it will increase footfalls by 25 to 30 per cent. (http://www.downtoearth.org.in/news/pedestrianisation-of-delhi-s-connaught-place-vehicles-to-be-banned-for-three-months-56727)
Space freed from parking would be unutilised	Attractive features for enhancing the experience of visitors by including recreational activities, street furniture, etc
Vehicles queuing up for entry into the limited parking lots will cause congestion on outer circle	Design provisions for ensuring queing doesnt happen like pick up/ drop off zones
Connaught Place has already lost a lot of business since malls have opened	Inviting and more vibrant spaces in terms of landscape and open congagation spaces to attract more people to visit
MIDDLE CIRCLE	
More commuting population comes to middle circle	Commuting population is rarely chauffeur driven and would be using the MLCPs or cab/ auto drop off zones on outer circle
Inner Circle walkable from middle circle	For physically infirm, it will be difficult to walk
Doorstep Vehicular access to residents	Residents would be given dedicated parking space in the courtyards in the middle of the blocks
Covered walkway absent beyond inner circle	Radials and outer circle have covered walkways, ratio of building height to road width creates shaded walkway in the middle circle. Lot of eateries and shops are opening on middle circle, attracting pedestrians, public utilities are also located in the middle circle
Petrol Pumps can be retained	Major customer base constitutes of commuters (shopkeepers and office employees) who would be directed towards MLCPs in both scenarios, it is unsafe inside such heavily populated area
Middle circle doesn't have aesthetic value	Potential for increasing aesthetic value of middle circle as exhibited by the facade improvement by H&M retail store Block B
OUTER CIRCLE	
Retaining parking on outer circle will not affect pedestrianisation	Removal of all surface parking expect in outer circle will lead to chaos and extreme congestion for through traffic since all cars would at first try to park there
The extra space would be unutilised	Parking at outer circle being retained for Cab and Auto drop-off and pick-up points added

4.0 Transport and Movement - Design Proposal



Car Parking

Auto Drop-Off / Pick-Up Zones

EV Movement Path

Pedestrian Movement Path

Pedestrian Movement Path

Cab Drop-Off / Pick-Up Zones

3D View Showing Proposal for Connaught Place

4.1. Traffic Management

4.1.1 Vehicular Circulation

Vehicular circulation

- Vehicular movement has been restricted within Connaught Circus to enable pedestrianisation.
- Vehicular access has been provided via a loop with entry from radial number 1, and exit from radial number 2.
- The loop has been provided for private vehicles only for pick up and drop off designed at point A.
- Metalled surface inside connaught circus would be retained for movement of emergency vehicles and logistic purposes.
- Loading/ Unloading is to be permitted only after 9:00 pm when the pedestrian traffic inside CP starts waning.
- To ensure that idling doesn't take place in the loop, automatic boom barriers should be installed at entry and exit with defined limitation of time, beyond which vehicles would be liable for heavy penalisation to be decided by implementation agency
- To prevent cabs entering the loop, manual challans could be issued intermittently



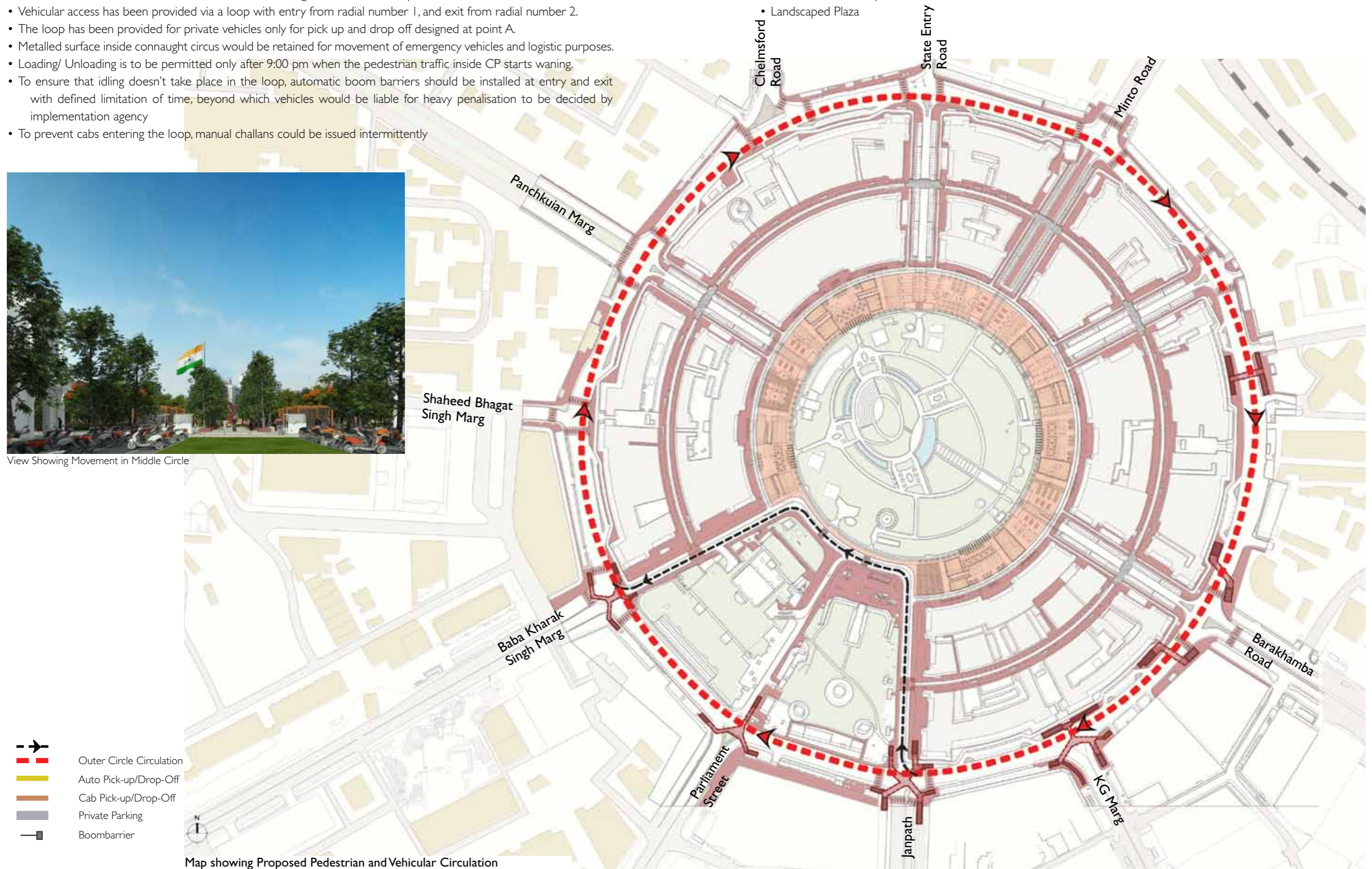
View Showing Movement in Middle Circle

4.1.2 Pedestrian circulation

The inner and middle circle of CP's business district, which attracts around 500,000 visitors a day, will be a "pedestrian-only" zone. (Source: <http://indiaopendata.com/connaught-place-pedestrianisation-a-critical-analysis/>)

As a part of pedestrianisation process entire Connaught Circus has been made pedestrian friendly

- The metalled surface has been paved throughout better connectivity between blocks
- Seamless connectivity to Central Park
- Landscaped Plaza



Map showing Proposed Pedestrian and Vehicular Circulation

4.2 Infrastructure

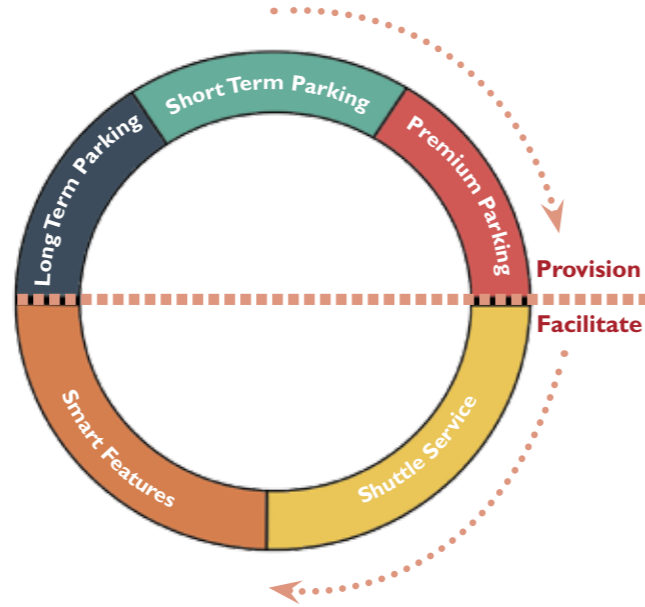
4.2.1 Parking strategy

Delhi is one of the few Metropolitan cities in the world where Parking in public spaces is permitted - almost for "free". This is virtually undemocratic since one sector of society is subsidized to occupy public land for a private use, without providing any benefits to the larger public.

(Source: Parking Policy as a Travel Demand Management Strategy, UTTIPEC, Oct 2010)

According to UTTIPEC Guidelines, 2010:

- Parking is a consumer commodity, not a legal right. No subsidized private parking is to be provided in public spaces.
- Parking for para-transport / feeder modes is to be prioritized and subsidized. In areas designated for private parking, short term parking must be incentivised and long-term parking be disincentivised in order to to maximize turnover and enable economic vibrancy



In the existing situation of CP, supply of parking is not able to meet the current demand, thus there is not enough parking space within the Connaught circus leading to overflow of vehicles on the road. CP comprising of highest retail value and in turn has high cost to surface parking which can be accommodated to the MLCP's present in the vicinity. Major clientele of CP comprises of office employees, retailers, small business owners and visitors (all age group), based on which different categories of parking have been framed i.e. surface within CP, MLCP within CP and MLCP outside connaught circus.



Long Term Parking:

Multi Level Parking lots were identified by NDMC in order to accommodate the parking which would be removed from within Connaught Circus due to pedestrianisation. These will be used as Long Term Parking spaces and will be subsidised by the government in order to maximise the use.



Short Term Parking:

Given the prominence of activities such as retail and recreation short term parking is the most convenient option for visitors coming for less time. This will lead to high turnover. Compared to long term parking this will have marginally high charges to discourage people to park for more number of hours.



Premium Parking

It is conceptually desirable not to have any parking within connaught circus. NDMC has identified parking lots in the outer circle to be used for parking facilities. Because of resistance from the traders premium parking areas were identified in the proposal. These will be highly charged parking lots to serve the short term requirements of the people visiting the area.

- Parking lots will be marked and appropriately numbered with good signages to ensure proper management.
- Prices will be exponential in respect to the number of hours the vehicle will be parked

Shuttle Service

Shuttle service has been identified as an integral part of the plan of pedestrianisation because of:

1. The unprecedented scale of the area to be pedestrianised.



In order to ensure that all typology of visitors to CP including the differently-abled are provided with an alternative for moving within Connaught Circus via the shuttle service

2. As parking provision has been shifted to multi-level car parks outside Connaught Circus, it necessitates a Park & Ride facility for the visitors to reach their destination.

Smart Features

Smart Parking, one of the most adopted and fastest growing Smart City Solutions across the world, involves use of low cost sensors, real-time data and applications that allow users to locate available parking spots. The goal is to automate and decrease time spent manually searching for the optimal parking floor, spot and even lot. Solutions can encompass a complete suite of services such as online payments, parking time notifications and even car searching functionalities for very large lots.



- **Optimized parking** – Users find the best spot available, saving time, resources and effort.
- **Reduced traffic** – Traffic flow improves as fewer cars are required to drive around in search of parking space.
- **Reduced pollution** – Searching for parking burns around one million barrels of oil a day.
- **New Revenue Streams** – Tiered payment options dependent on parking space location. Also, reward programs can be integrated into existing models to encourage repeat users.
- **Integrated Online Payments** – Returning users can replace daily, manual cash payments with account invoicing and application payments from their phone.
- **Increased Safety** – Real-time data can help prevent parking violations and suspicious activity. Decreased spot-searching traffic on the streets can reduce accidents caused by distraction of searching for parking.
- **Real-Time Data and Trend Insight** – For improved efficiency and services
- **Decreased Management Costs** – Automation saves on labour cost and resource exhaustion.
- **Increased Service and Brand Image due to Enhanced User Experience** – Payment, spot identification, location search and time notifications all become part of the destination arrival process creating a brand image to the user with cutting edge technology and convenience factors.

(Source: <http://www.plasmacomp.com/blogs/benefits-of-smart-parking-solution>)



GPS Fleet tracking to enable swift and tracked movement of the shuttle vehicles



Retractable bollards which can be closed in case of crossing of emergency vehicles. Source : <http://annsfasteners.com/products.html>



Automated Boom barriers at Entry/ Exit of Premium Parking (Source: http://vkelektroniks.blogspot.in/2012_08_01_archive.html)



Electronic signboards before entry to radials to show the slots available in each parking lot (Source: <http://www.led-signs.com.au/electronic-signs-australia-news.html>)

4.2.2 Proposed Parking

	Location	Rationale for location	Target User Group	Pricing strategy	Last mile connectivity
Long Term	DLF Capitol, Shivaji Stadium	Availability of MLCP in proximity	<ul style="list-style-type: none"> Office employees, Shopkeepers, Clientele intending to spend time (movie, students - coaching centres) To be used for events and other special congregations 	<ul style="list-style-type: none"> Free or nominal charges Passes for regular users 	Park & Ride
Short Term	Palika Parking, Super Bazaar	MLCP inside CP for easier access	Shoppers and other visitors with intended short stays, requiring convenience, and willing to pay higher charges	Differential pricing ensuring high turnover by steep increase in rates after 1-1.5 hrs	Park & Walk
Premium	Radials 3-7	<ul style="list-style-type: none"> Proximity to stores Least hindrance to pedestrian movement 	Patrons of high end stores and restaurants who would pay the premium charges for the convenience of parking adjacent to destination	<ul style="list-style-type: none"> High parking charges increasing exponentially with time Differential pricing based on peak hours 	Not Required

Parking Supply (Existing v/s Proposed)				
Parking Lot	Type Of Parking	Existing Capacity (Ecs)	Current Status	Proposed Capacity (Ecs)
Inner circle	Surface	462	462	0
Middle circle	Surface	0	384	0
Radial circle	Surface	436	436	351
Outer circle	Surface	403	403	0
Palika parking	MLCP	1016	250	1016
Dlf Capitol	Mechanised MLCP	1408	300	1408
Shivaji stadium	MLCP	750	50	750
Super bazar	Surface	50	50	50
TOTAL		4525	2335	3575

(Source: Base Data- New Delhi Municipal Corporation)

Residential Parking:

- Parking for residents has been provided in the courtyards in Blocks G, H, M, and N
- Retractable bollards and RFID tag system to be installed for the residences to regulate the parking
- They would be able to access and egress from outer circle

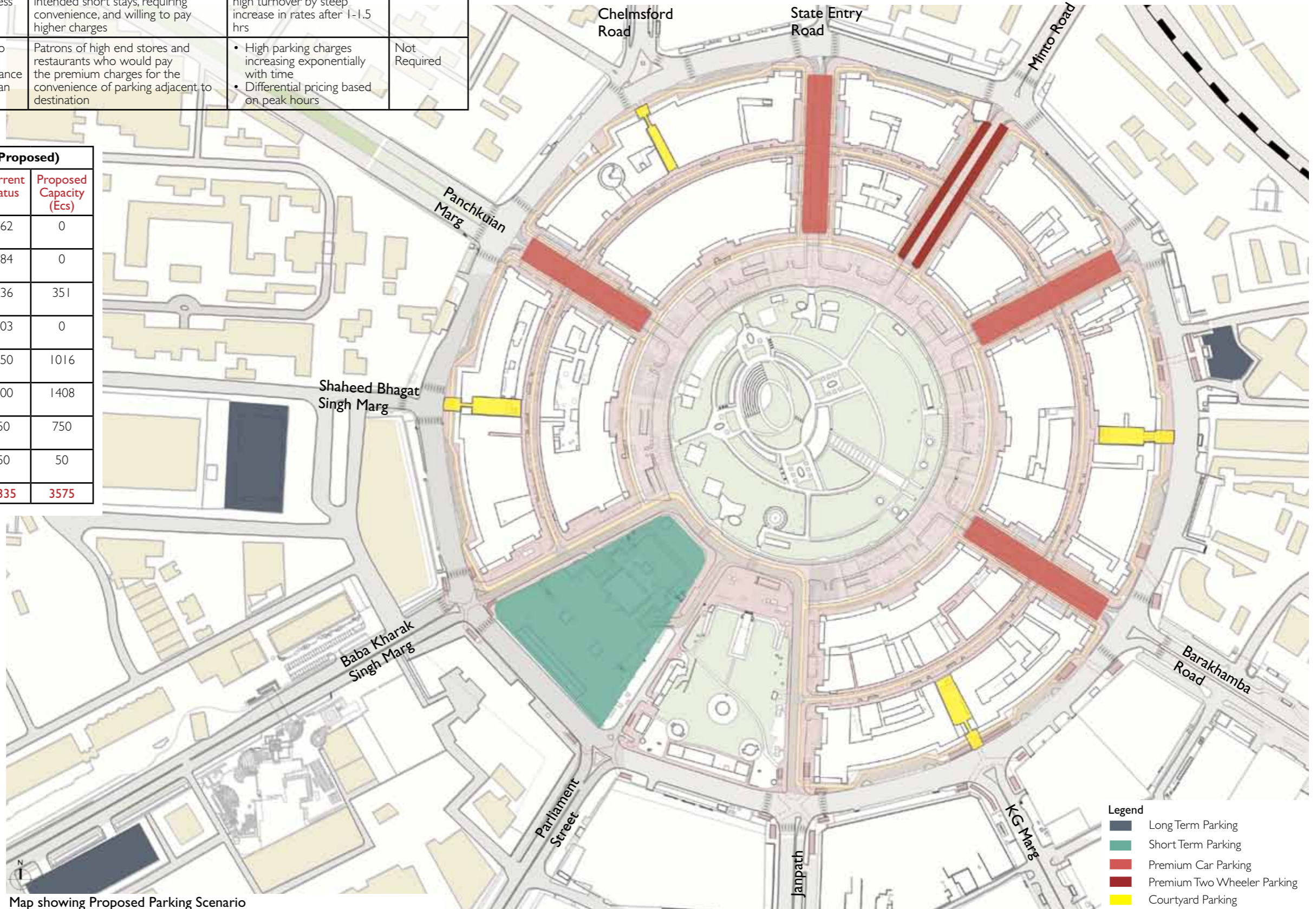
Note:

Utilities in MLCP must be well maintained for facilitating behaviour change in users. Palika Parking needs to be improved in terms of access/egress by ensuring that the lifts are functional.

Smart Features:

For feasibility of the given proposals, the following smart components have been incorporated in the system design:

- Electronic signages displaying real time information regarding bay availability and related charges - To be located at prominent locations outside each parking lot and cumulative information boards on all roads entering Outer circle
- Boom-barriers for regulating entry to premium parking lots and to automate its operation
- Retractable Bollards for regulating the access to residential parking since the space available is insufficient for installation of Boom-barriers.
- Sensor based parking bays in Non-mechanised MLCP parking lots to minimise internal circulation and save time by automatically directing incoming vehicles towards available bays - Palika Parking & Shivaji Stadium Parking



Map showing Proposed Parking Scenario

4.2.3 Proposed Shuttle Service Movement

Essential Features of Shuttle Service vehicles

- | | |
|--|---|
| <ul style="list-style-type: none"> 1. Battery Operated vehicles - environment friendly 2. Small, low speed - human scale integrating with pedestrianisation 3. Covered transparently <ul style="list-style-type: none"> • reduces weather impact • while maintaining security • good visual connection with environment | <ul style="list-style-type: none"> 4. GPS fitted <ul style="list-style-type: none"> • Route mapping for ease of navigation • Fleet tracking: management of fleet in each pocket • Ensuring safety at night |
|--|---|

Operation and Maintenance:

Within Connaught Circus

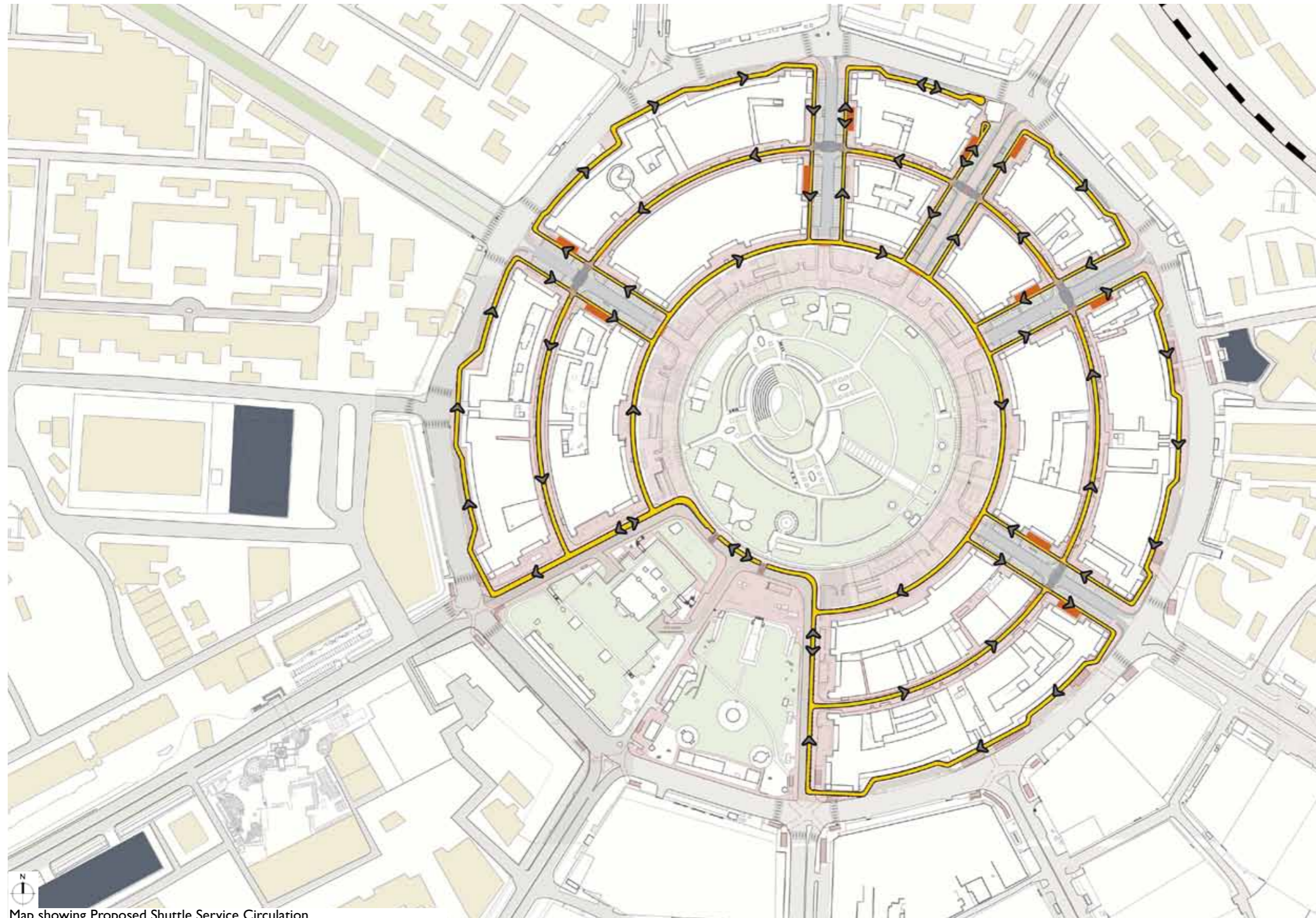
- An uninterrupted path for small shuttle with riding capacity of 4-6 people
- These would be hail-as-required shuttles, not to be shared with strangers
- They would provide point - to - point connectivity within CP

- For idling of these shuttles in between trips, small pockets with carrying capacity of 10 shuttles have been provided in front of each block on inner, middle, and outer circle from where the shuttles would pick up and drop passengers
- For longer duration of parking of the remaining fleet of shuttles, larger spaces on radials have been identified. Vehicles parked in these pockets would be automatically directed as per requirement to the smaller pockets using a fleet tracking system based on GPS
- It can be a free service provided by NDMC along with an air-conditioned variant for users willing to pay for the added comfort

Connectivity with Parking Lots outside CP

The primary parking provision is in MLCPs outside Connaught Circus which are located at a distance of 300-400 meters from the outer circle.

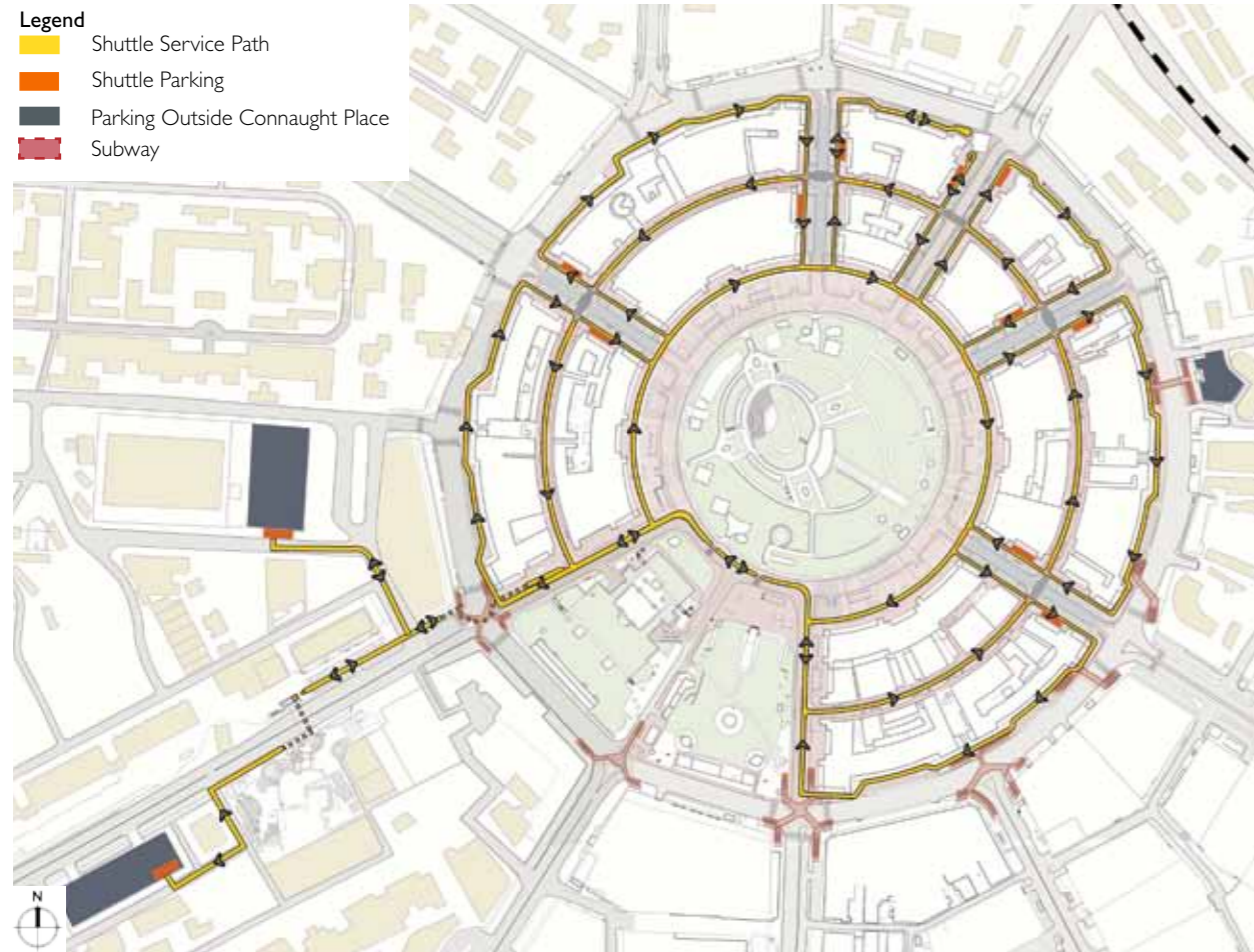
To provide Park & Ride facility from these parking spaces, two alternatives have been proposed to make the entire mobility experience seamless.



Map showing Proposed Shuttle Service Circulation

- Legend**
- Shuttle Service Path
 - Shuttle Parking
 - Parking Outside Connaught Place

Option 1 - Small Shuttles



Map showing Proposed Shuttle Service Circulation with Small Shuttle

In option 1, small shuttles would be used to provide access to parking lots. The low occupancy of these shuttles would enable personalised movement without sharing with strangers. It will, however, increase the number of vehicles in operation. Because of the small size of these units, they will not operate on carriageway to ensure safety. Also, the large numbers would hinder the traffic on outer circle leading to congestion. Therefore, a segregated pathway for these shuttles has been identified as shown in the map above. For crossing carriageways, existing subways will be used by the shuttles. These subways will need to be upgraded to enable the movement.

- Golf cart to be boarded from DLF capitol. I
- It crosses over via Hanuman Mandir subway.
- Crosses over the outer circle road via subway from Baba Kharak Singh Marg to Radial no. 2.

Pros:

- No waiting time as its a personalised service,
- Less travel time due to direct connectivity,
- No sharing required with strangers alleviating safety concerns specially of higher income group,
- Single mode change,
- No additional load on traffic moving on outer circle,
- Single fleet requirement
-

Cons:

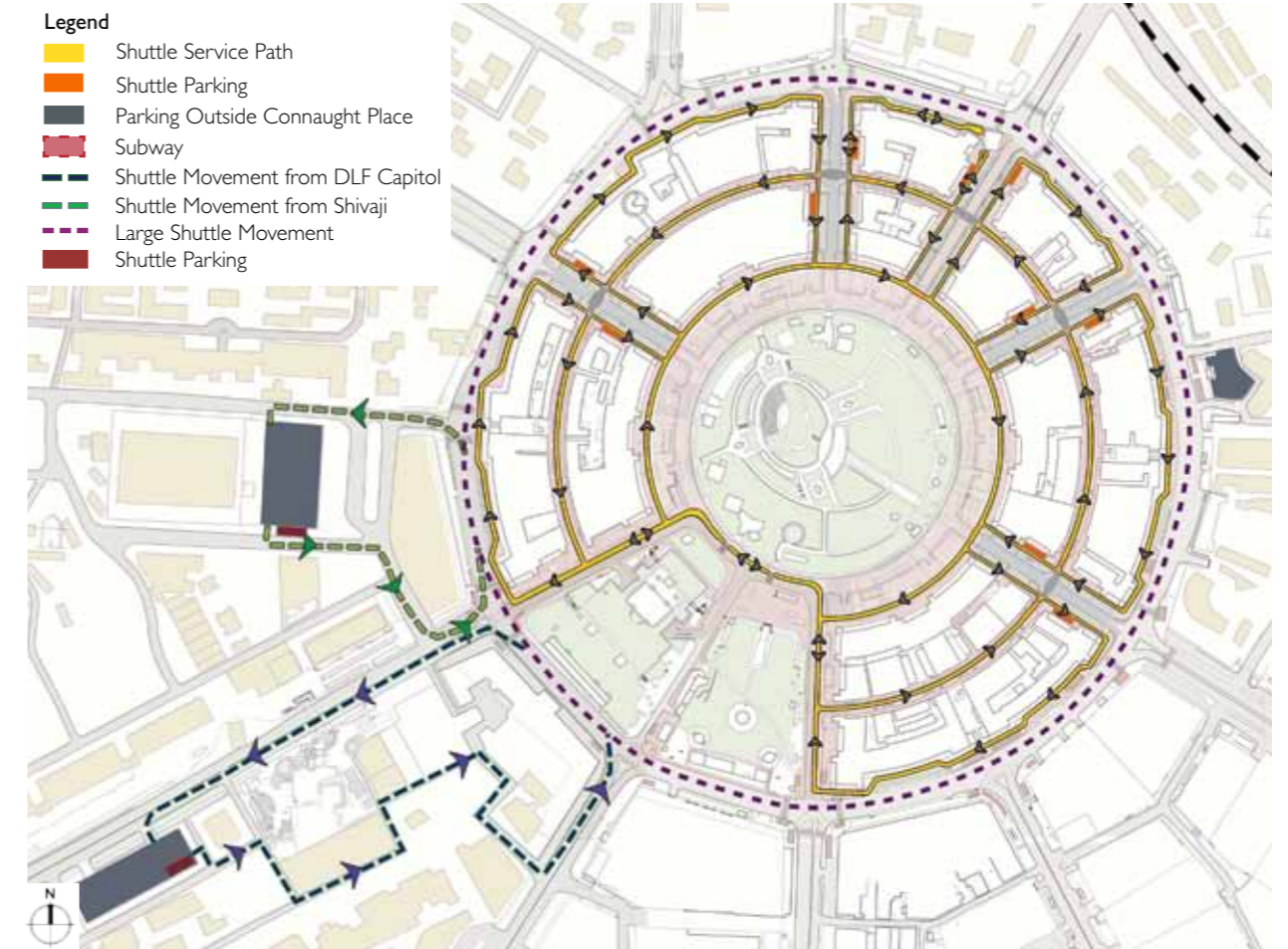
- Requires infrastructural up gradation-subways,
- Time consuming implementation process,
- Large number of vehicles required leading to management issues,
- During peak hours the low capacity might lead to delays.



4 Seater Shuttle Vehicle
(Source: <http://cnfvev.en.made-in-china.com/product/zBuxbHjHjgkA/China-Utility-Vehicle-Electric-Golf-Cart-with-4-Seater-Made-by-Dongfeng-Motor.html>)



Option 2 - Large Shuttles



Map showing Proposed Shuttle Service Circulation with Large Shuttle

In option 2, large shuttles would be used to provide access to parking lots running at regular intervals in the outer circle. The shuttle will transfer people to and from dedicated parking lots identified on the outer circle. For ease of movement visitors would have to change to small shuttle service (smaller shuttles) at designated points. These would run from each parking lot outside Connaught Circus for pick-up and drop-off. As it will be a twelve to fifteen seater vehicle, it can move easily on the outer circle with fast moving traffic. These will be easier to manage and for operation would not require any infrastructure changes near the current facilities. Therefore, for managing the service, all will be connected with a GPS system.

Pros:

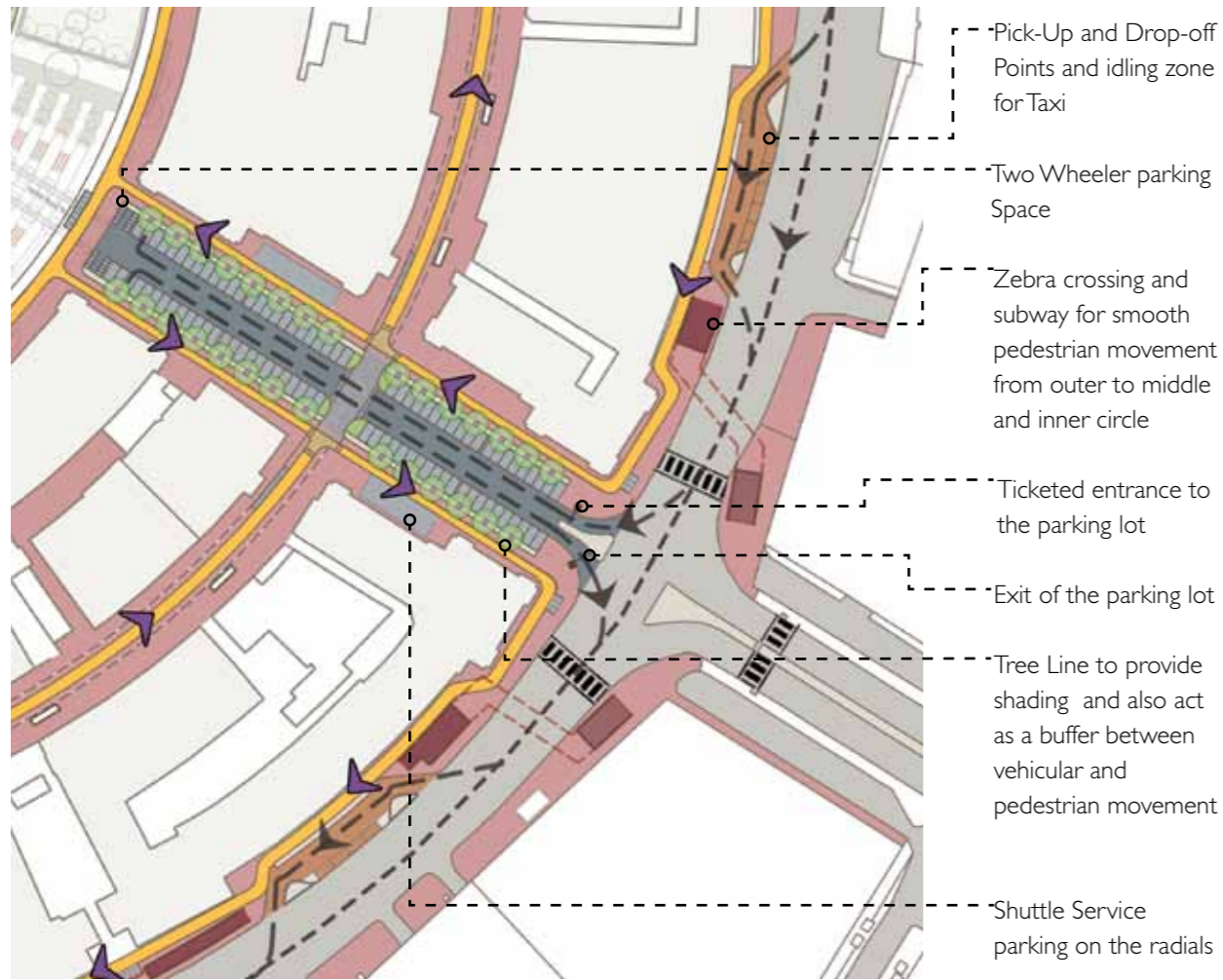
- Easier to manage,
- Can move on outer circle with fast moving traffic,
- No infrastructure construction required/ Doesn't require red light,
- Connects both MLCPs upto end

Cons:

- Time to fill up to capacity,
- Two mode changes,
- More travel time,
- Weaves in and out of through traffic for entering/ exiting Connaught circus thus interrupting the flow of traffic,
- Requires maintenance of two types of fleets



12 Seater Shuttle Vehicle
(Source: http://woseneven.ec21.com/14_Seater_Sightseeing_Car-6106794_5498286.html)



Detail of Radial 2 showing Premium Car Parking and Movement of Shuttle



Detail of Radial 2 showing Premium Two Wheeler Parking and Movement of Shuttle



View of Connaught Place Showing Premium Car Parking on the Radial



View of Connaught Place Showing Premium Two Wheeler Parking on the Radial



View of Connaught Place Showing Shuttle Service Parking and Landscape Plaza Connectivity

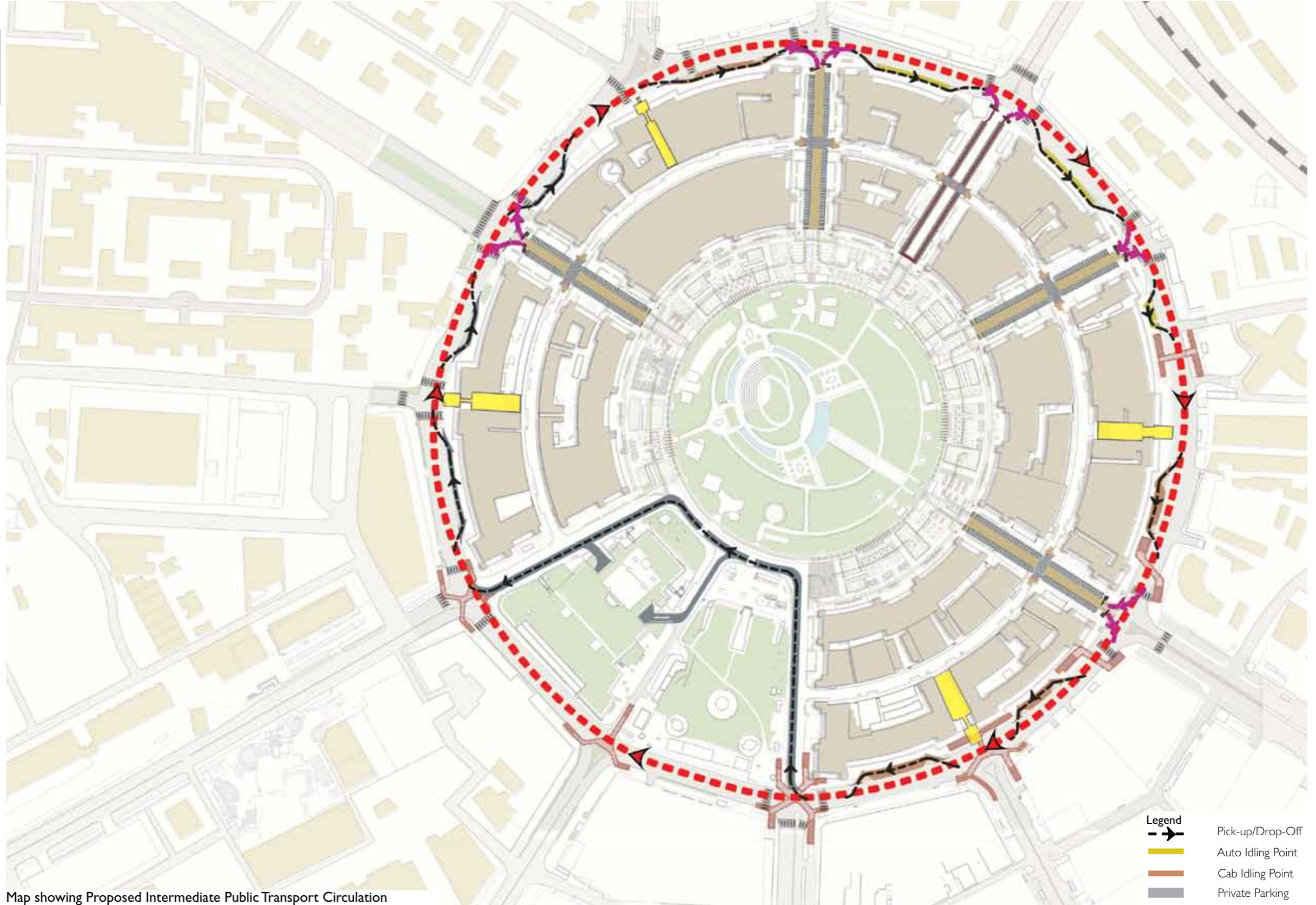
4.2.4 Intermediate Public Transport (IPT)

Multi-modal integration is key to providing passenger comfort and for providing seamless connectivity for transit services.

- Well planned and properly designated spaces for modes such as shuttle service, auto-rickshaws, cabs, etc. within a 5 minute walking catchment of the stations;
- Basic amenities like toilets, proper signage, lighting, trees, shading devices, etc. for commuters;
- High quality walking environment including safe crossings/ well-shaded walkways/ footpaths, etc.;
- Safety and a sense of safety for all users especially women and children;

Proposed Pick Up / Drop Off in Outer Circle

Auto parking outer circle	49
Taxi / cab parking outer circle	30



Map showing Proposed Intermediate Public Transport Circulation

4.3 Imperatives to enable success of pedestrianisation in CP

Today, while there are few who would argue against pedestrianisation, the way to go about it is very important. There are many important imperatives that need to be taken into account:

1. REVAMP PALIKA PARKING:

- Providing smart parking ie Parking managed and monitored by central tracking system which tells the availability of number of car parking available in each parking level
- Providing lifts within the complex for access to entry / exit points
- Proper provision of other infrastructural facilities like ramp , lighting , toilets , drainage and signage



2. HAWKING NOT ALLOWED

Often, pedestrianisation leads to a spurt in the number of street hawkers, with the freeing up of space. Strong regulatory measures with effective management strategy needs to be formulated before implementation of pedestrianisation.



3. STAKEHOLDER CONSULTATIONS

Stakeholder consultations are an essential imperative in the entire process. Without the cooperation of the shop owners, the best of plans may not succeed. In fact, the planning has to begin with stakeholder consultations. One of the major fears of the shop keepers is the loss of business due to pedestrianisation, which actually does not have much evidence. It could at best only be a short term effect and in the long run, the total 'look and feel', ambience and experience of the place is what attracts customers.



4. EFFECTIVE MANAGEMENT

The initiative entirely depends upon effective management. The authorities, therefore, have to ensure that all the necessary services and aids needed for the pedestrians should be well in place and good in terms of frequency due to a healthy population number of Delhi. In addition to this, micro based pedestrianization initiatives should be encouraged in other places so that more and more population is sensitized and chances of inconvenience are kept to minimum. (Source: <http://indiaopendata.com/connaught-place-pedestrianisation-a-critical-analysis/>)



5. PROVISION OF ASSISTANCE: A proper reporting of the nature of crowd coming to such locations has to be made and monitored so that with the changing conditions the right kind of assistance can be provided to anyone if required.



6. SIGNAGES

Signage should be provided throughout to orient the user to the desired destination. These could also be standardised to maintain uniformity and ease of recognition



7. FREE OF ENCROACHMENT

Pedestrian pathway should be kept free of encroachments like parking , Garbage etc for seamless and swift movement.

8. MAINTAINANCE OF UTILITIES

Upgrade & Maintain utilities like public convenience ,garbage disposal etc ,in and around CP to ensure proper use.



9. GUIDE MAP FOR WAY FINDING

A guide map to be made available at various central spots around CP to help users navigate in and around CP. This map could also highlight the movement of the shuttle services and the nearby landmarks.

10. REAL TIME DATA APPLICATION

App providing real time information about parking in CP could be developed to enable user in different part of the city know the availability of parking. This can also be linked with the real time traffic data.



11. PARKING POLICY

Parking policy around areas of CP to be formulated and enforced strictly to enable swift movement of traffic in and around CP.

12. VENDOR POLICY

Vendor policy for CP should be formulated earmarking dedicated hawking / vending zones and discouraging encroachment of designed public spaces by unregistered hawkers



13. FACADE UPLIFTMENT

Redevelop super bazaar complex as a new automated MLCP to accommodate another 800 cars approx.



14. FACADE UPLIFTMENT

Facade control in middle circle should be introduced Violation to be curbed by standardizing size and design of hoardings and advertisements .

5.0 Landscape Design Proposal



INTRODUCTION

Connaught Place is one of the largest financial, commercial and business centres in New Delhi. It has always been a magnet, drawing visitors not only from central Delhi but from the entire city.

Any tourist travelling to Delhi would visit CP at least once. Crediting to its central location, easy and safe approach, its historic colonial facade, its potential as a meeting space.

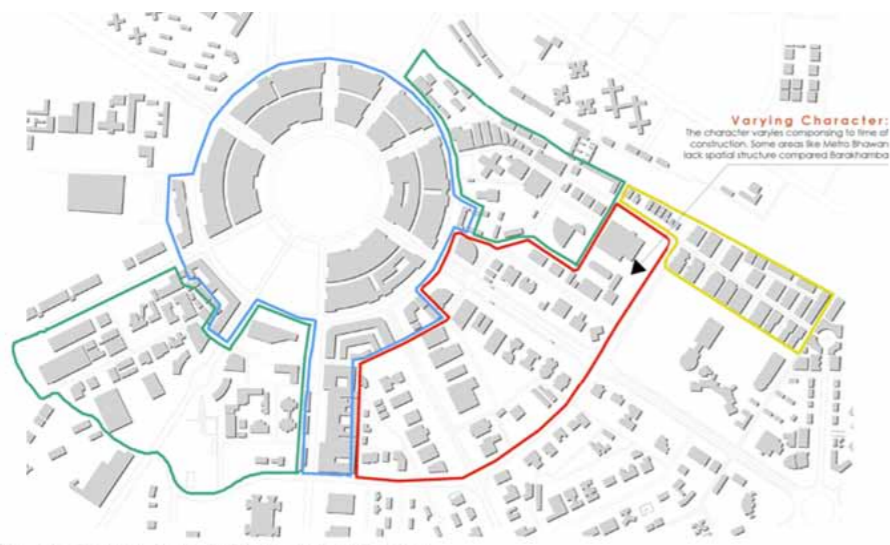


Figure Ground and Character Zones

5.1 ISSUES

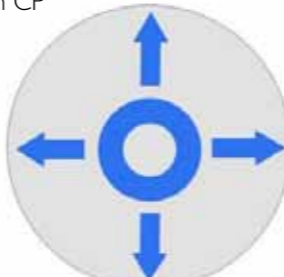
Issues pertaining to the area are:



FORM



Lack of Identity
It gets difficult to orient oneself in CP



MOVEMENT



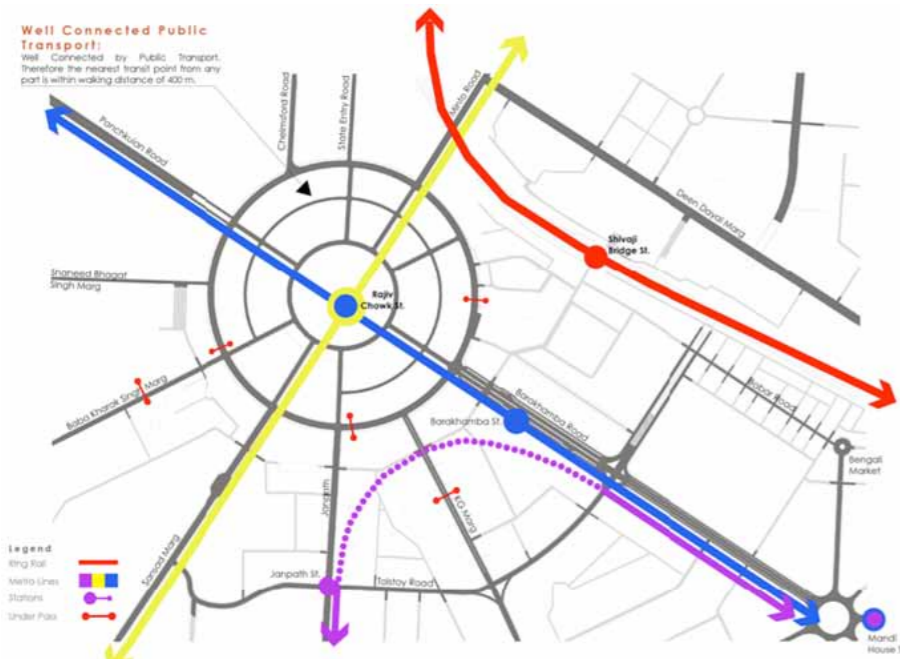
Intersection of vehicular and pedestrian movement



FUNCTION



Variety of end users:
Visitors, Residents, Traders, Office goers



Connectivity: Avenues and Public Transport



Public Realm

5.2 VISION for the Urban Open Space

Reclaiming a public space, centrally located etched in the collective memory for a safe & healthy civic life.

DESIGN STRATEGIES

The design strategies will help in achieving the vision



LIVABILITY



Seating and illumination



Barrier free design



Information kiosks



Pedestrian and vehicular grade separation



Emergency vehicle access



STAINABILITY



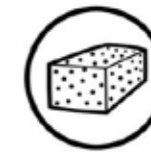
Encourage non-motorised transport



Combine signs/lights/signals on same pole



Use of recycled construction materials



Porous pavements



Increase green cover



PEDESTRIAN FRIENDLY



Address human scale through design



Reducing surface car parking areas



Maintaining zebra crossing/tabletop



Organise uses to support public activity



Provide space for public events



BICYCLE FRIENDLY



Separation of cycle and vehicular lane



Secure and easily accessible bicycle parking



Direct/simplified route



Visibility of cyclists



Signalise junctions



ROAD DECONGESTION



Integrated road network



Parking pricing and management



Road retrofitting

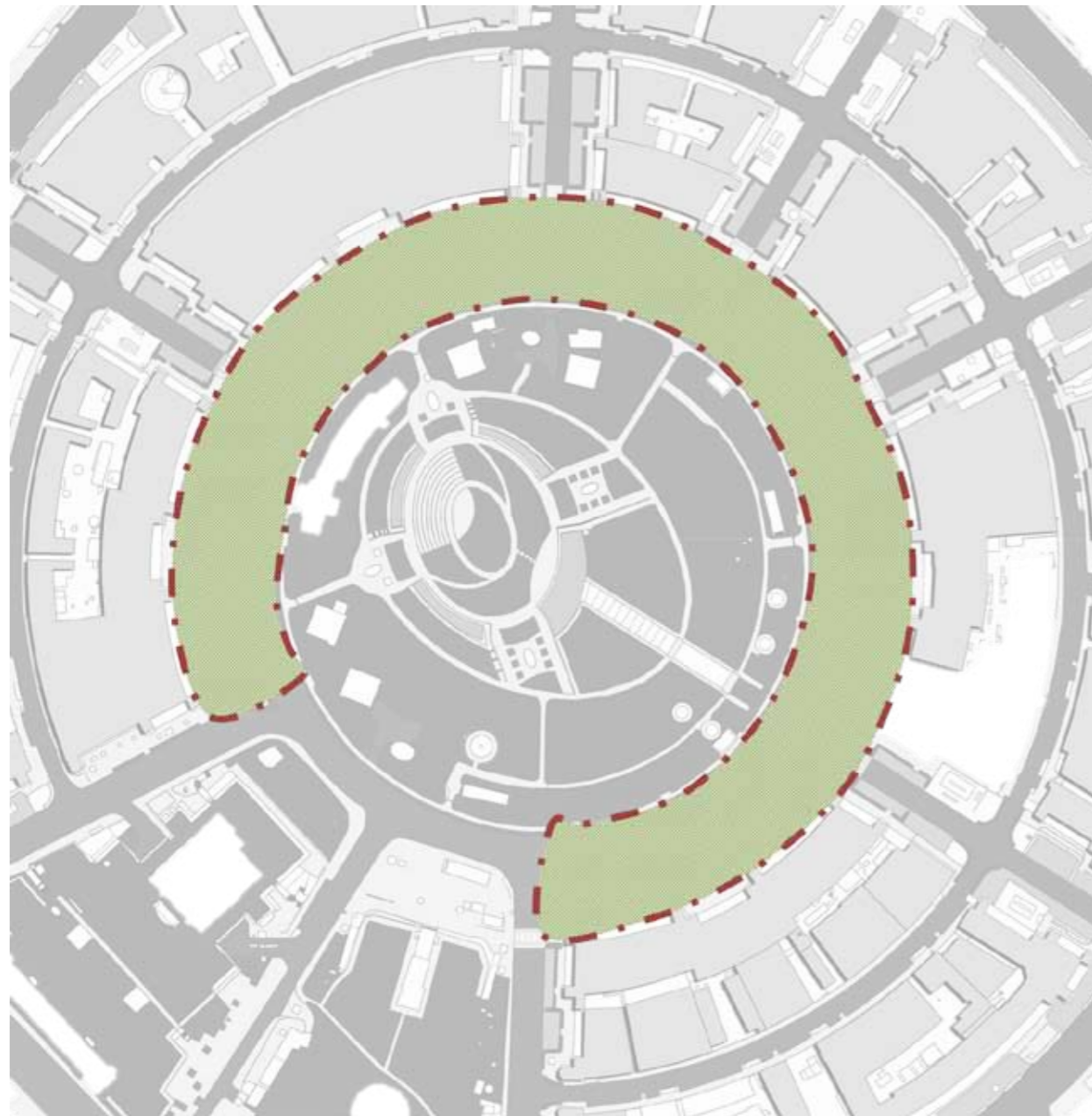


Intelligent transport system



Removing road cholesterol

5.3 RECLAIMED AREA - 37,000 sqm i.e. 9.15 acres



Considering the potentials and issues of the space and envisioning the concept of Pedestrianisation, around 37,000 sq.m ie. 9.15 acres of area in the inner circle will be reclaimed and landscaped and given back to the city.

Reclaiming urban public space, means reclaiming the right to walk, to stroll, to sit alone, to hang out with others, to wander, to get lost, to be visible, to be invisible, to use a toilet, to just be, in all those spaces, at all hours. Quality public space instills in all of us a sense of belonging — that we belong to a larger community and in turn, that our city belongs to us.

Well-designed, beautiful public spaces have the power to restore a sense of dignity to our urban environment, enrich our civic life and foster a sense of ownership in local residents. Each day, every one of us moves through public space, whether driving down the street, walking down the sidewalk, or sitting in a park. When we as citizens take ownership of our public spaces, we reap the benefits of a healthy, vibrant, energetic community. (<https://www.civildesigncenter.org/productions/rps/reclaiming-public-space.1868009>)

Cp has a multitude of users ranging from the, residents, office goers, shoppers, people who come to meet friends and colleagues to vendors, shopkeepers, cafe owners etc. People drop in around festivals to celebrate the decorated space, enjoy matches displayed on screens in Central park, attend performances or are on a shopping spree. In the present scenario, this grand landmark of the city gets clogged with cars bringing in noise and pollution especially during peak hours, weekends and festivals.

A vibrant meeting space for the entire city



Image Source: <https://www.whatsuplife.in/delhi/blog/things-to-do-at-connaught-place-new-delhi/>



Image Source: 1. <http://www.gettyimages.in/event/rain-blesses-delhi-165294717#people-take-shelter-during-the-rain-in-the-afternoon-at-sacred-heart-picture-id164920562>
 2. <https://selfdrivetrips.files.wordpress.com/2015/10/connaught-place-cp.jpg>
 3. <http://www.gettyimages.in/event/heavy-rainfall-in-delhi-ncr-559952999#commuters-drive-through-water-logged-stretches-opposite-ambekar-on-picture-id477115228>
 4. <http://www.rediff.com/money/report/pix-connaught-place-has-something-for-everyone/20141027.htm>
 5. <https://www.whatsuplife.in/delhi/blog/things-to-do-at-connaught-place-new-delhi/>



Image Source: <http://www.raahgiridays.com/2014/10/dancers-on-stage-making-everyone-dance.html>



Image Source: <http://www.countercurrents.org/mittal080814.htm>



Image Source: <https://www.pps.org/blog/sweet-rebellion-reclaiming-indias-streets-with-raahgiri-day/>



People gathering in Connaught Place on Sundays for Raahgiri (an initiative for making streets for all)



Image Source: <https://www.eventshigh.com/detail/Delhi/46a23aefdc28fa36814b374b1c728f9b-photo-walk-connaught-place-c?src=ecbox>



Image Source: <http://saltandsandals.com/tamasha-at-connaught-place/>



Nukkad natak during Raagiri

Image Source: <http://timesofindia.indiatimes.com/city/delhi/Raagiri-Day-celebrated-at-Connaught-Place-in-Delhi>



Artists performing at the Inner Circle



Hockey Match Between India And Ireland During The 2016 Rio Olympic Games; On The Giant Screen At Central Park, Connaught Place On Aug. 6, 2016.

Image Source: <http://yashnews.com/new-delhi-fans-enjoys-the-hockey-match-between-india-and-ireland-during-the-2016-rio-olympic-games-on-the-giant-screen-at-central-park-connaught-place-of-new-delhi-on-aug-6-2016/>



Dilli ke Pakwan, the Food Festival at the State Emporio, Baba Kharak Singh Marg, Connaught Place

Image Source: <https://hoho-delhi-bus.blogspot.in/2016/12/food-festival-in-delhi-2016.html>



Image Source: <https://m.rediff.com/money/report/pix-connaught-place-has-something-for-everyone/20141027.htm>



Image Source: <http://indiatodayintoday.in/story/ndmc-happy-hours-connaught-place-khan-market-pubs-shops-night-life/1353302.html>

EXAMPLES FROM ALL AROUND THE WORLD



Sundance Square Plaza

IMAGE SOURCE: <https://ssqgmt.com/history/>



Trafalgar-square

IMAGE SOURCE - <https://www.theguardian.com/stage/2012/jul/16/big-dance-traffic-square-review>



Ukulele flash mob, held near the lions in Trafalgar Square, London, UK

Image Source: <https://ukuleleflashmob.com/latest-news/>



Outdoor dining scene at Huntington Station's central plaza

Image Source: <http://sourcethestation.com/idea/outdoor-plaza-dining-scene/>

A safe heaven in the heart of the city



Connaught Place is under constant surveillance of Delhi Police even at night hours

Image Source: <http://economictimes.indiatimes.com/wealth/personal-finance-news/delhis-connaught-place-ranked-fifth-most-expensive-office-market-in-the-world-cbre/articleshow/47722308.cms>



Image Source: <http://www.htsyndication.com/htsportal/image/Tight-Security-Ahead-Of-Independence-Day-/HTS1147086355814113>



Inner circle stays well lit and bustling with activity p till 10pm

Image Source: <http://holladelhi.com/wp-content/uploads/2016/05/cp-stroll.jpg>

A festive place which celebrates urban life



Delhi Street food festival Image Source: <https://www.skymetweather.com/content/lifestyle-and-culture/5-delhi-food-festivals-you-must-not-miss/>



Radio city Music Talent Hunt



Book reading session held at Oxford bookstore Image Source: <http://brownpaperbag.in/delhi/shop/bpb-review-oxford-bookstore-connaught-place/>



Annual New Delhi Queer Pride Parade by LGBT activists 27/11/2016 Image Source: <http://www.news18.com/news/india/when-delhis-connaught-place-lit-up-in-rainbow-colours-again-1182571.html>

EXAMPLES FROM ALL AROUND THE WORLD



1. Singapore - Clarke Quay

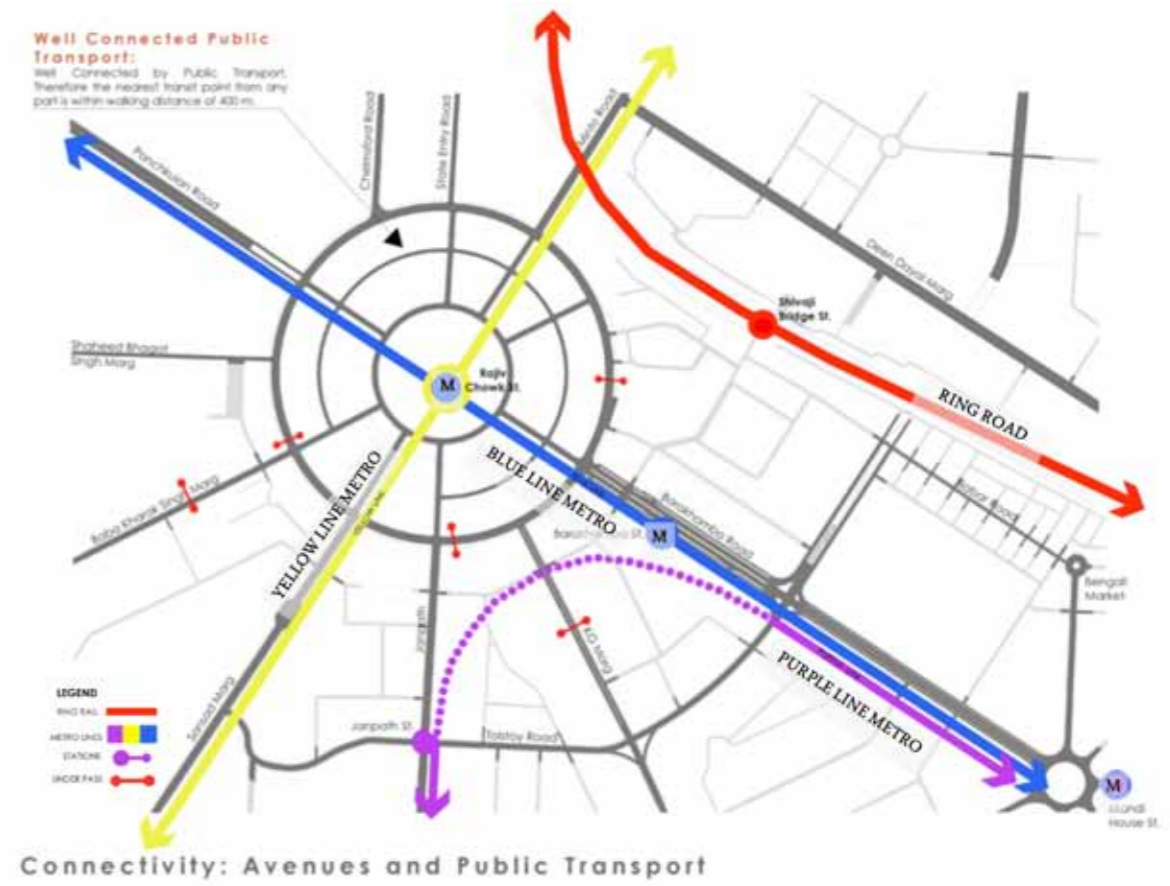
Image Source: <http://intour.com.au/tours/singaporelights16.html>

2. Times square

3. St Patrick's Day in London: Trafalgar Square

Image Source: <https://www.go4travelblog.com/celebrating-st-patricks-day-in-london/>

Extremely well connected



Interactive plazas

EXAMPLES FROM ALL AROUND THE WORLD



Innsbruck square

Image Source: <http://www.landezine.com/index.php/2010/11/maria-theresien-strasse/>



A Shady Agnes Katz Plaza

Image Source: <https://www.flickr.com/photos/13726219@N06/7398418724>



DAVID H. KOCH PLAZA AT THE METROPOLITAN MUSEUM OF ART

Image Source: <https://twitter.com/landezine/status/585357162412711936>



Image Source: <https://www.toposmagazine.com/david-h-koch-plaza-metropolitan-museum-art/>

Enhanced shopping experience



Shopping at Janpat Market

Image Source: <https://travelagencyindia.wordpress.com/tag/shopping/>



Shopping at Inner Circle

Image Source: <https://media-cdn.tripadvisor.com/media/photo-s/09/0d/a3/95/connaught-place.jpg>



Food outlets at Connaught Place

Image Source: <https://foodbeautytravel.files.wordpress.com/2011/05/dsc02116.jpg>



Shopping at Janpat Market

Image Source: <https://www.whatsuplife.in/delhi/blog/wp-content/uploads/2015/08/janpath.jpg>

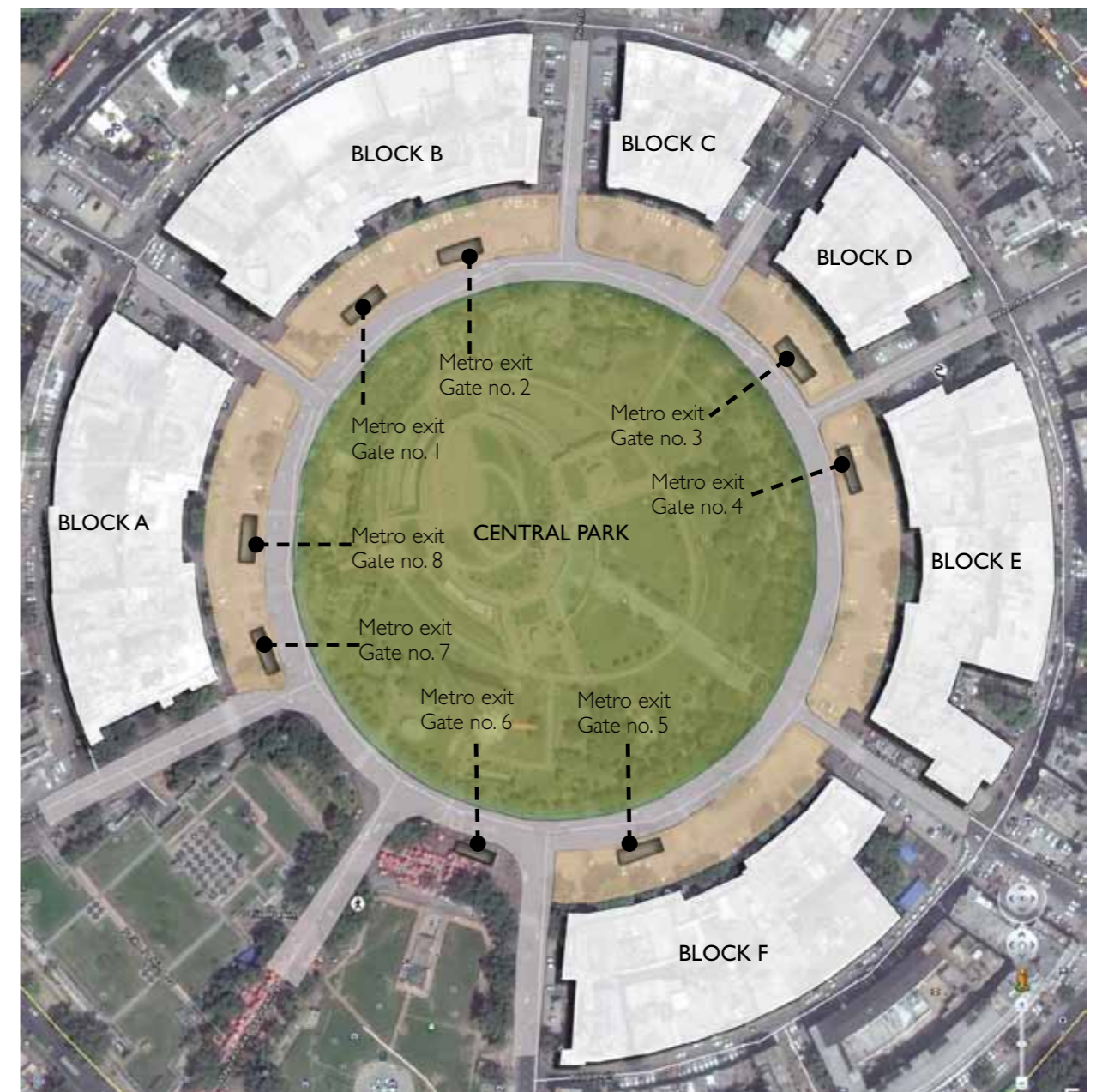
CP is frequented not only for shopping but a large number of visitors gather/ meet friends or acquaintances here, the place being centrally located. It is a favoured location since it houses a lot of eating joints, cafes and restaurants. The events and activities hosted in the central park and the expanse of the green open space invites youngsters and families with kids. Vendors selling nick nacks and the decorations during the festive time are also an attraction.



Interactive spaces outside the shops would enhance the shopping experience

Image Source: <http://truecommercial.nzherald.co.nz/insights/news/property-articles/epson-and-greenlane-to-get-a-heart/news=0&p=-1&pp=-1>

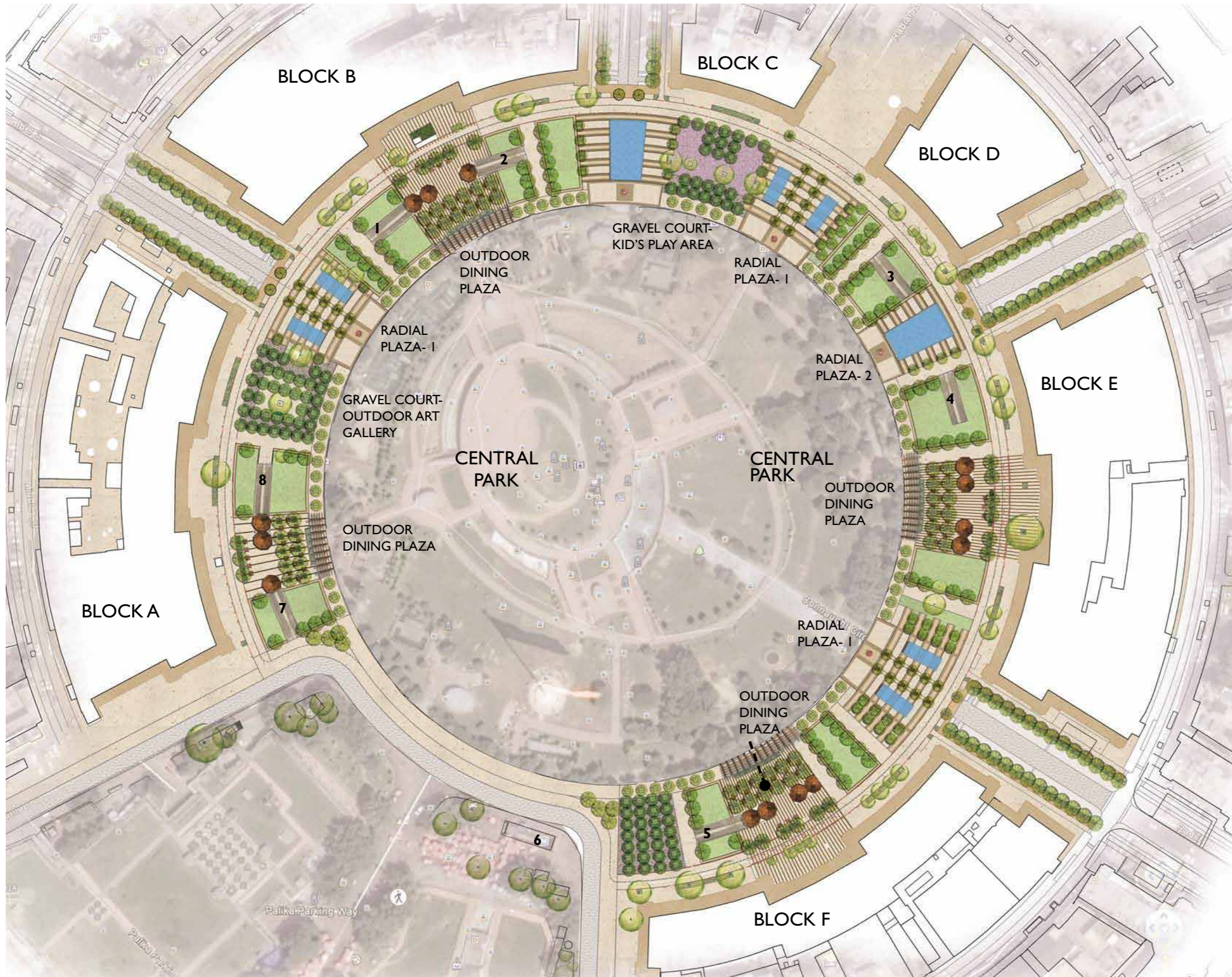
5.4 LANDSCAPE DESIGN PROPOSAL FOR INNER CIRCLE



Plan Showing the components of the existing Inner circle

The Central park forms the core of the Inner circle with concentric circles accommodating the roads, parking areas, paved plazas and built blocks emerging from it. 8 nos. Radial roads branch out from the 14m wide carriageway. The built blocks in the Inner Circle are named as Block A, Block B, Block C, Block D, Block E, Block F (in clockwise direction) with the underground Palika market & underground Palika parking with their green terraces.

Each block is flanked with a covered colonnade and an uncovered continuous walkway but the pedestrian movement is disrupted by the vehicular circulation on the radial roads. Paved plaza lined with trees and seats sit in front of the shops. A wide variety of cosmetic shops, restaurants, branded showrooms, banks and ATMs, cafes etc open up in the inner circle. Various eateries like Keventers, wengers, embassy etc spill over onto the plaza. The corridors of the inner circle are lined with vendors selling junk jewellery, phone covers and accessories. Several stage shows, match screenings, band shows happen in the Central park. People from all age groups gather here for outings with family, to meet friends, shop, eat, watch movie, window-shopping etc., making it the most vibrant zone.



- 1 Metro exit Gate no. 1
- 2 Metro exit Gate no. 2
- 3 Metro exit Gate no. 3
- 4 Metro exit Gate no. 4
- 5 Metro exit Gate no. 5
- 6 Metro exit Gate no. 6
- 7 Metro exit Gate no. 7
- 8 Metro exit Gate no. 8

OUTER PROMENADE

• The Outer Promenade marks the unhindered path continuously running along the built edge.

• This continuous paving links all the blocks which at present is punctured by radial roads.

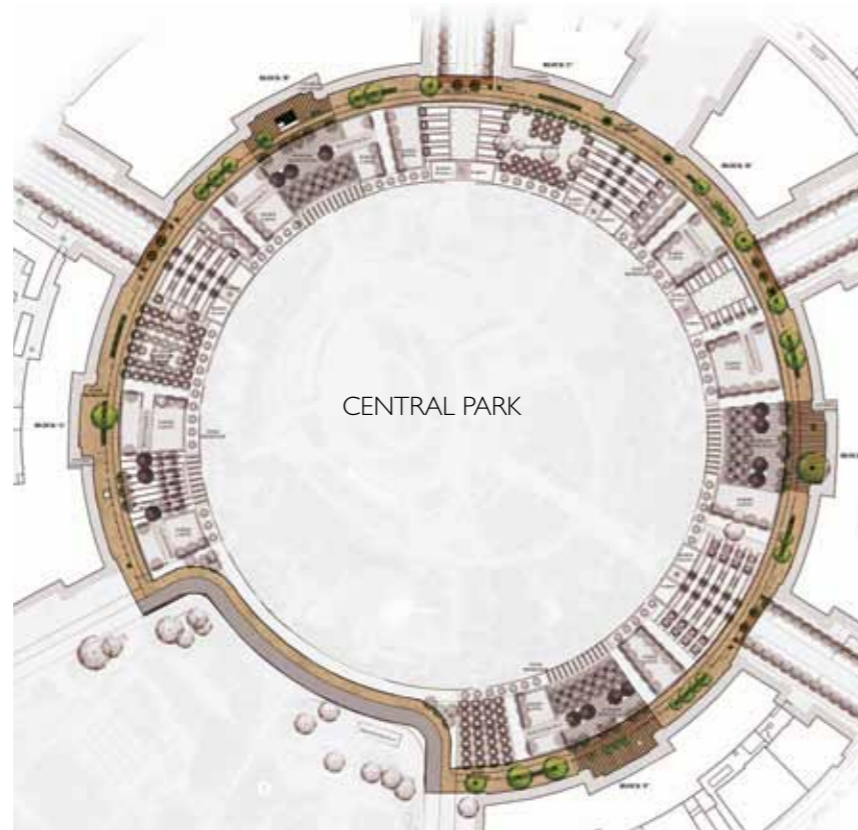
• The outer promenade runs seamlessly through the various proposed activities like outdoor dining courts, outdoor exhibition spaces, play areas, radial plazas etc.

• It accommodates the Emergency Vehicle Path, Electronic vehicle circulation, Service loading- unloading & pedestrian access to the shops, existing lifts providing access to the underground metro station and existing trees

• It extends from the outer edge of the colonnade to the edge of the raised green lawns.

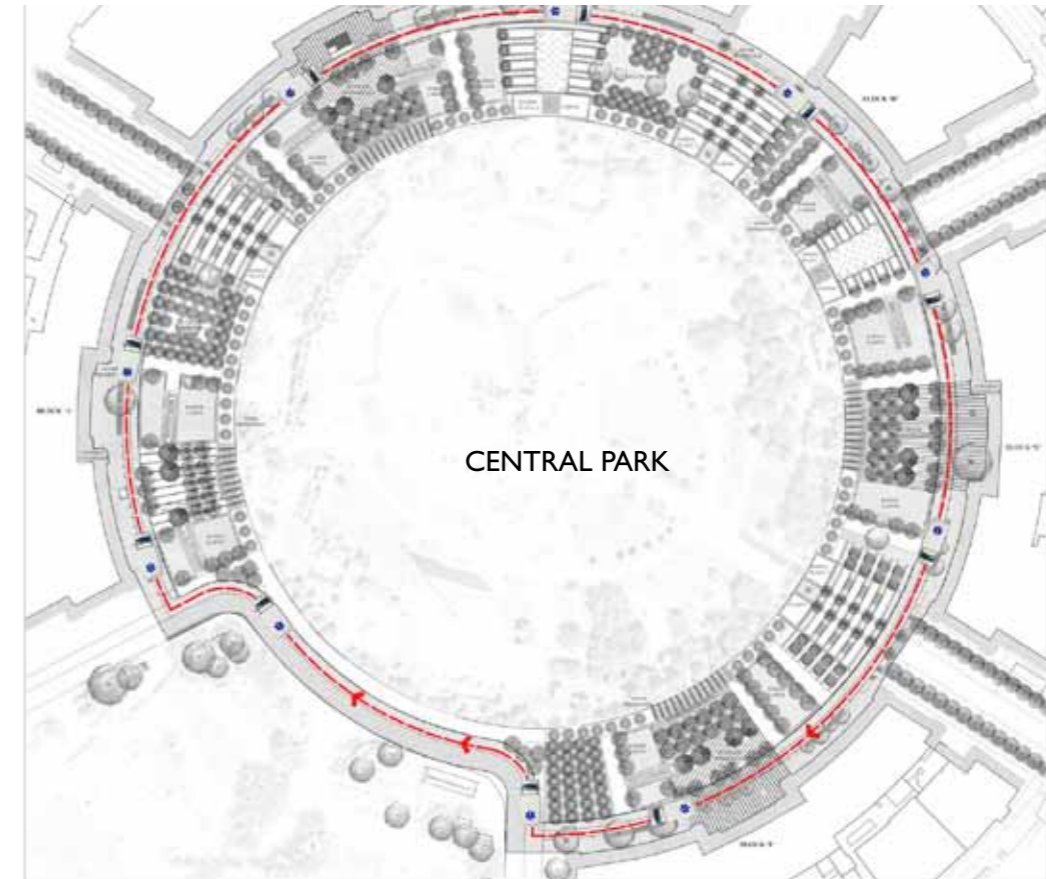
• The fire tender path is guided by trees, bollards and the toe walls of the raised lawns.

• The 3m wide Electronic vehicle circulation is defined by path washers/ drive over lights.

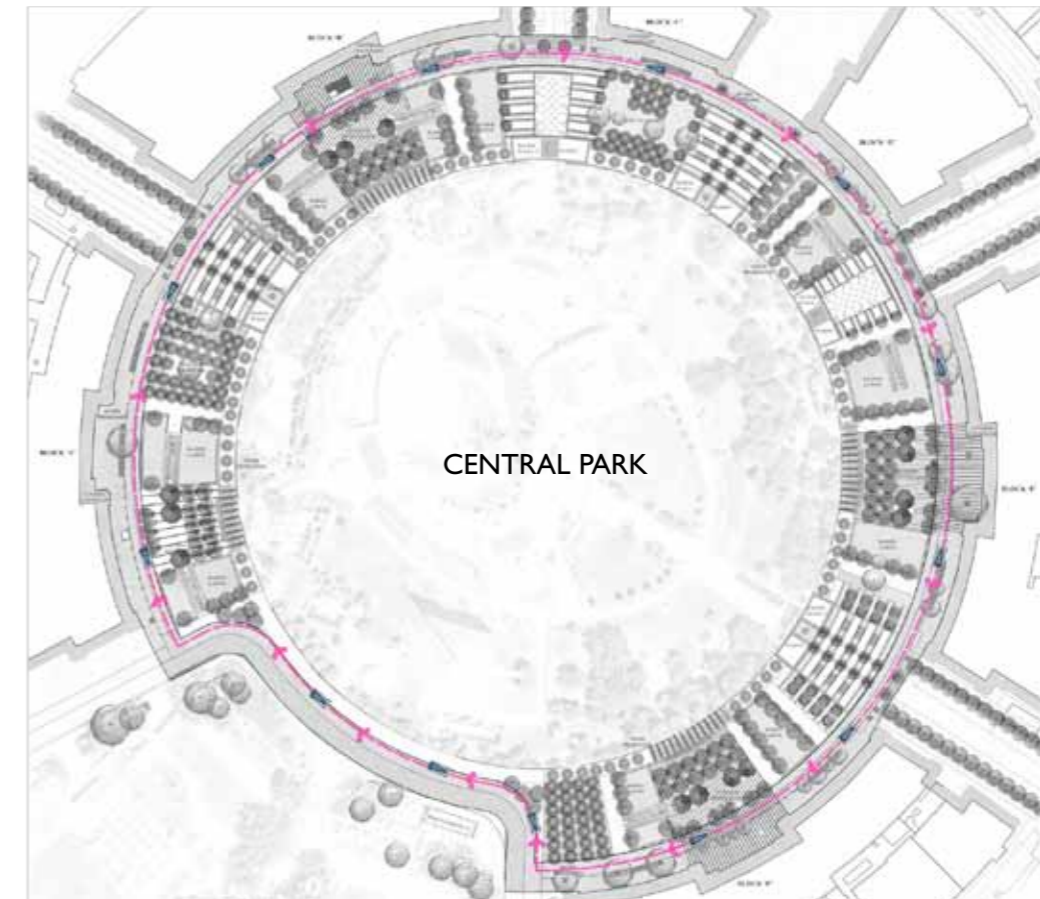


OUTER PROMENADE

Emergency vehicle movement



Electric vehicle movement





Additional trees shade the now hard paved parking areas

View showing the Plaza Area

Path washers/ drive over lights define the electronic vehicle circulation.

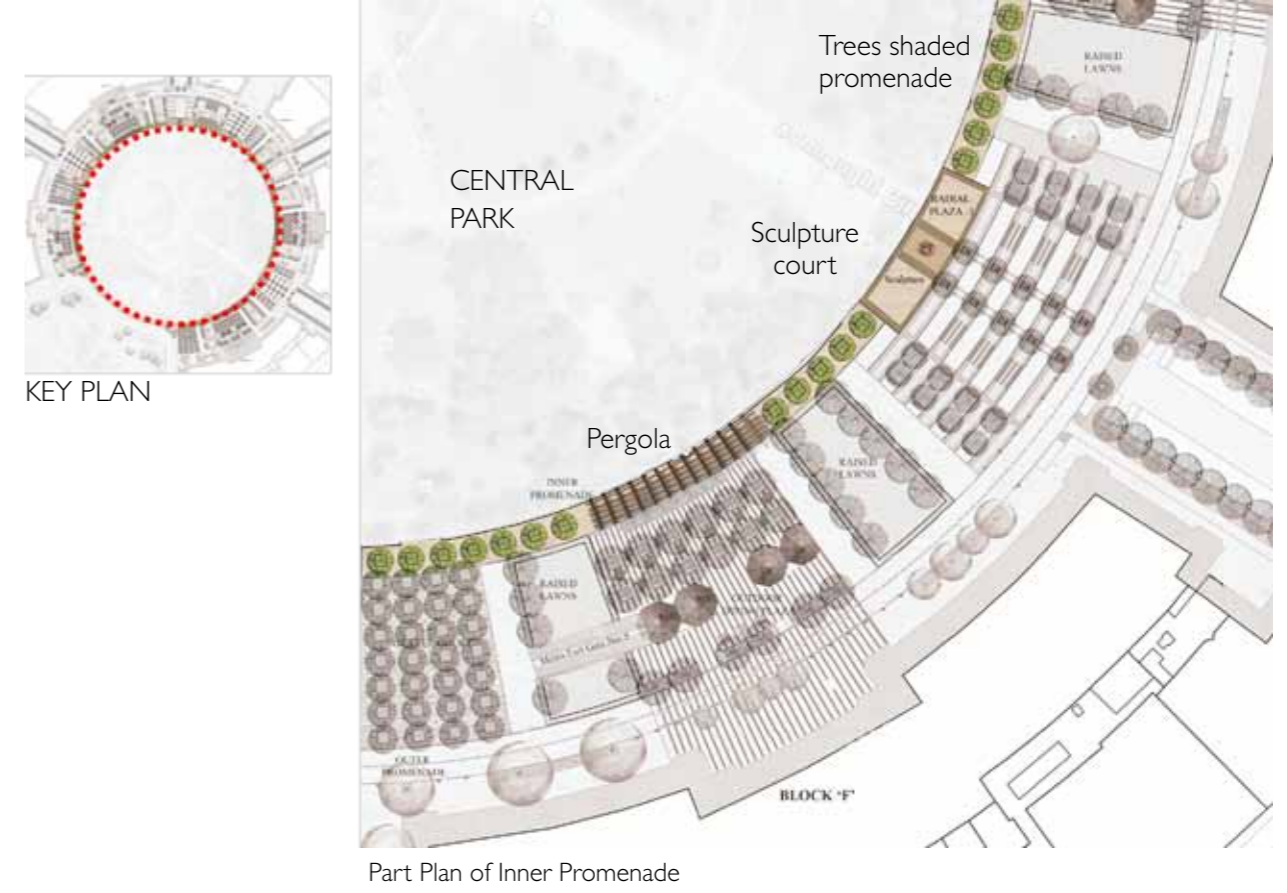


View showing the Plaza Area

Green strip to retain the existing trees. These also guide the Fire tender path

Raised lawns with seat wall provide for the green cover as well as seating spaces for the visitors

INNER PROMENADE



- 6m wide Inner peripheral circulation for pedestrian access to the Central Park
- The Inner promenade includes the area of currently existing 2.4m wide pathway around the Central park and rest area of the metalled road.
- It is a continuous walkway shaded with trees and pergolas.



Reference images for tree shaded areas
Image Source: <https://www.pinterest.com/pin/140033869633834035/>



Reference images for pergola shaded areas- Central Wharf Plaza
Image Source <https://landscapeperformance.org/case-study-briefs/central-wharf-plaza>

- Like the Outer promenade, the inner promenade too links all the radial roads terminating into the Inner circle.
- It interweaves the radial plazas, the outdoor dining areas and other activity zones.
- The inner promenade is shaded by trees and pergolas to encourage access during summers.
- The radial plazas terminate into a sculpture court intersecting the inner promenade making the continuous walk interesting.
- The pergolas shade the areas leading to the outdoor dining court.

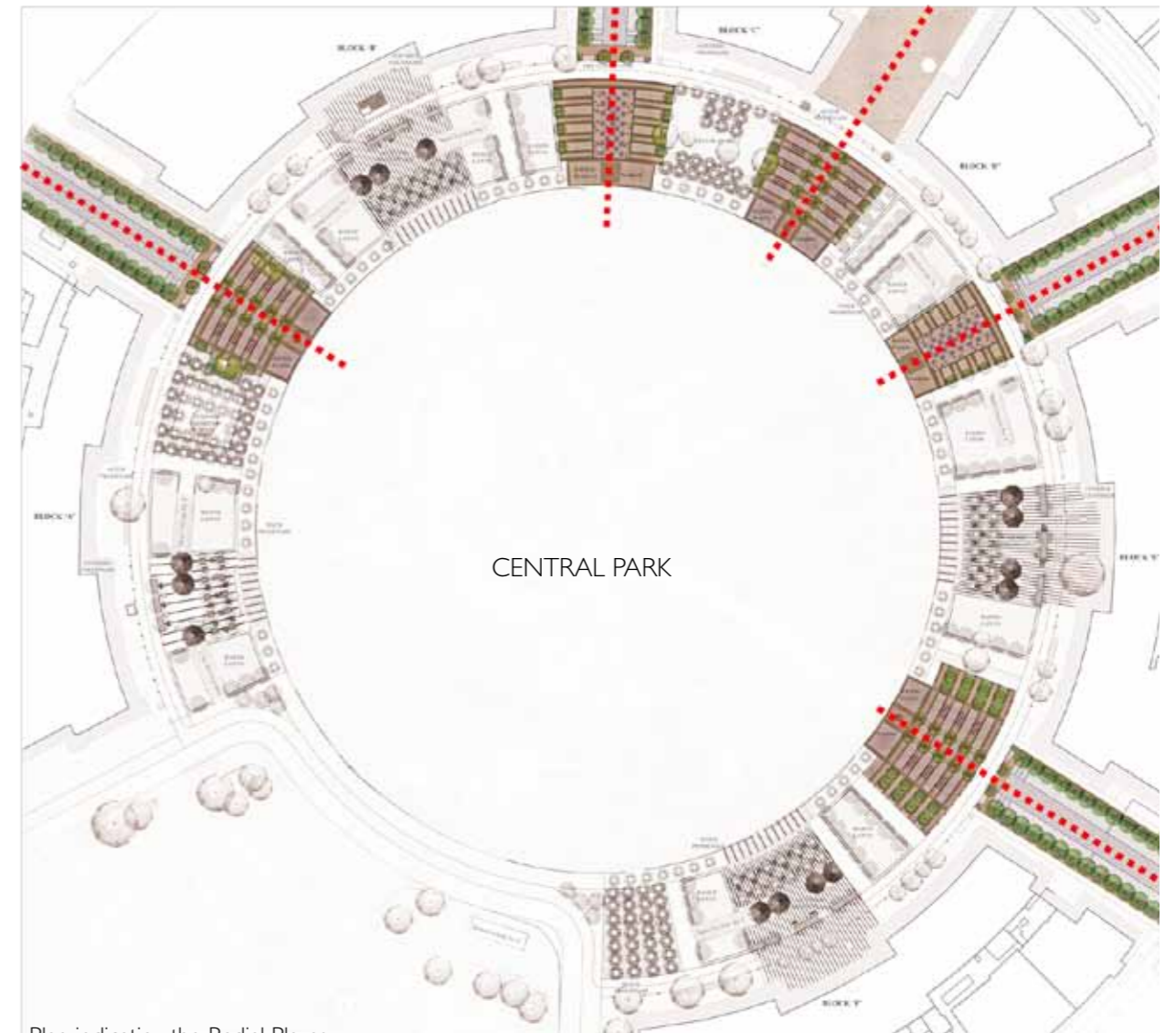


View showing the Pergola shaded inner promenade



View showing the inner promenade

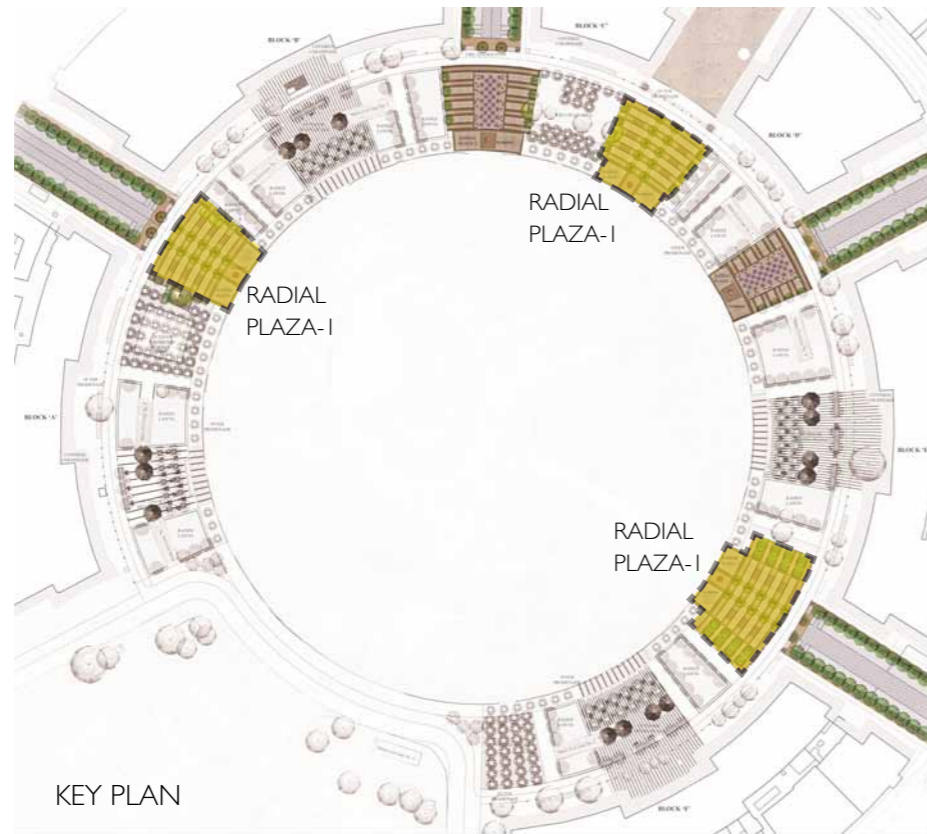
RADIAL PLAZAS



Plan indicating the Radial Plazas

- The 5 Plazas mark the termination of the 5 radial roads into the inner circle, celebrating the Axial Linkages into CP.
- All the Radial Plazas conclude with a sculpture, rendering the space a sense of identity and orientation to the blocks which it presently lacks.
- These plazas abutt the edge of the Central Park forming visual and physical access to the park.
- The tree lined proposed road section opens up into wide tree shaded paved areas, this marks the extent of the vehicular circulation.

RADIAL PLAZA - I



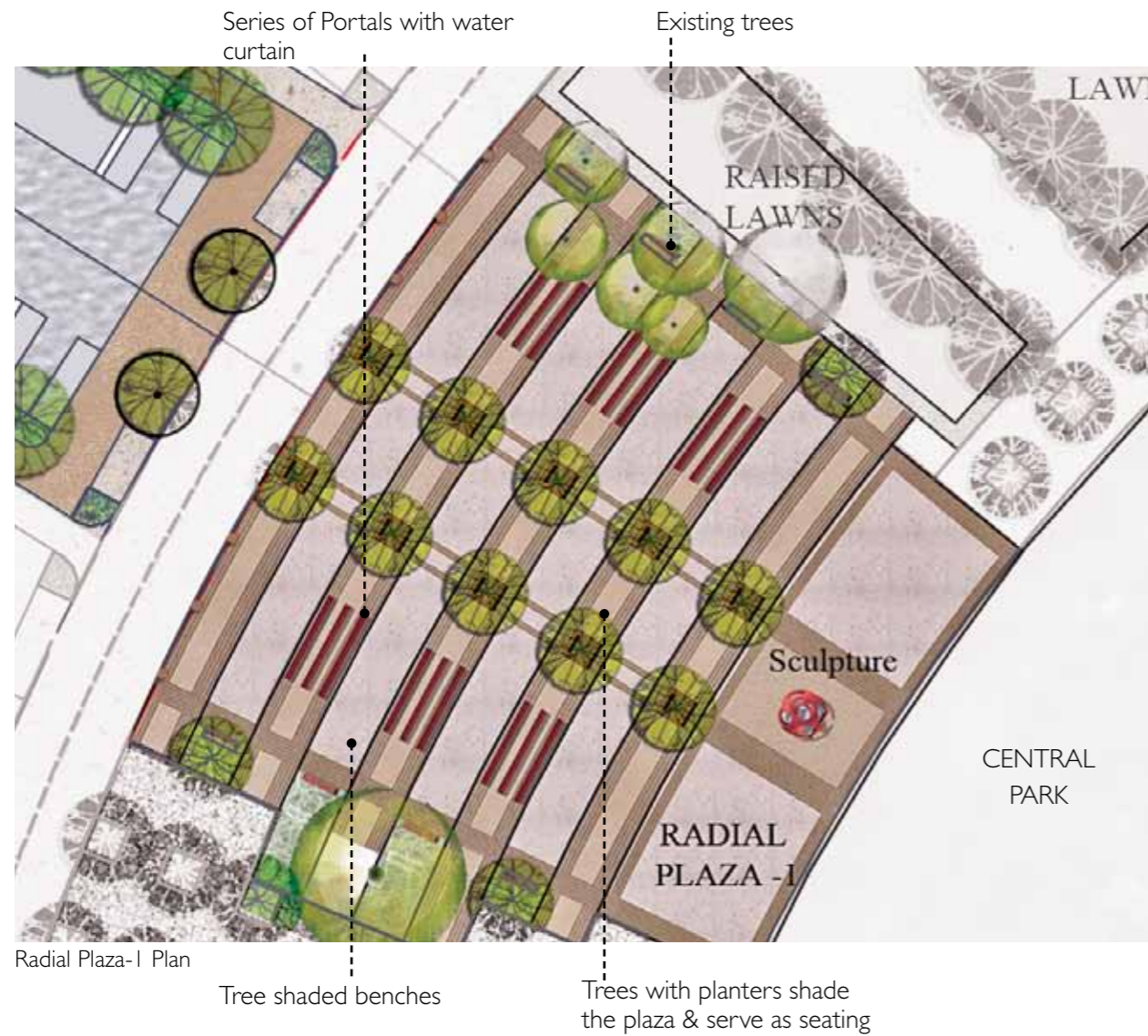
- The Radial Plaza I marks the entry into the Central park
- The plaza comprises of water portals, tree planters and shaded seating areas, all arranged on radial axis.
- These water portals have water threads within which people can walk under or walk from the sides to appreciate the view of the water element without getting wet.
- The tree planters with seat wall shade this wide paved area.
- Presence of water and trees makes the area conducive to extreme climate which the visitors can appreciate at all times of the year.



View showing the Radial plaza



View showing the Radial plaza



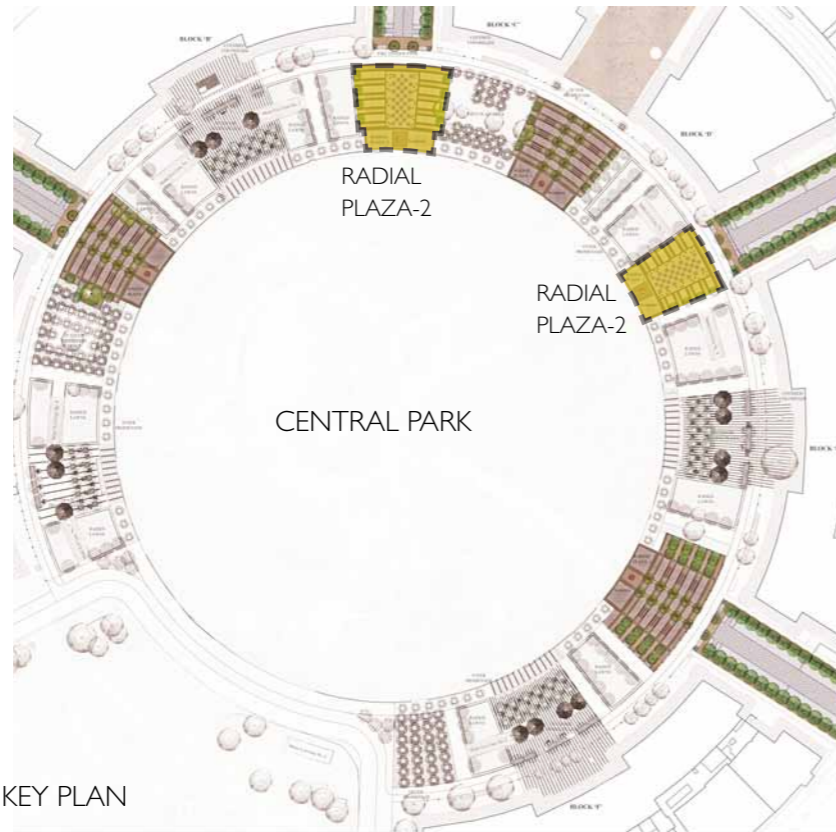
Radial Plaza-I Plan

Tree shaded benches

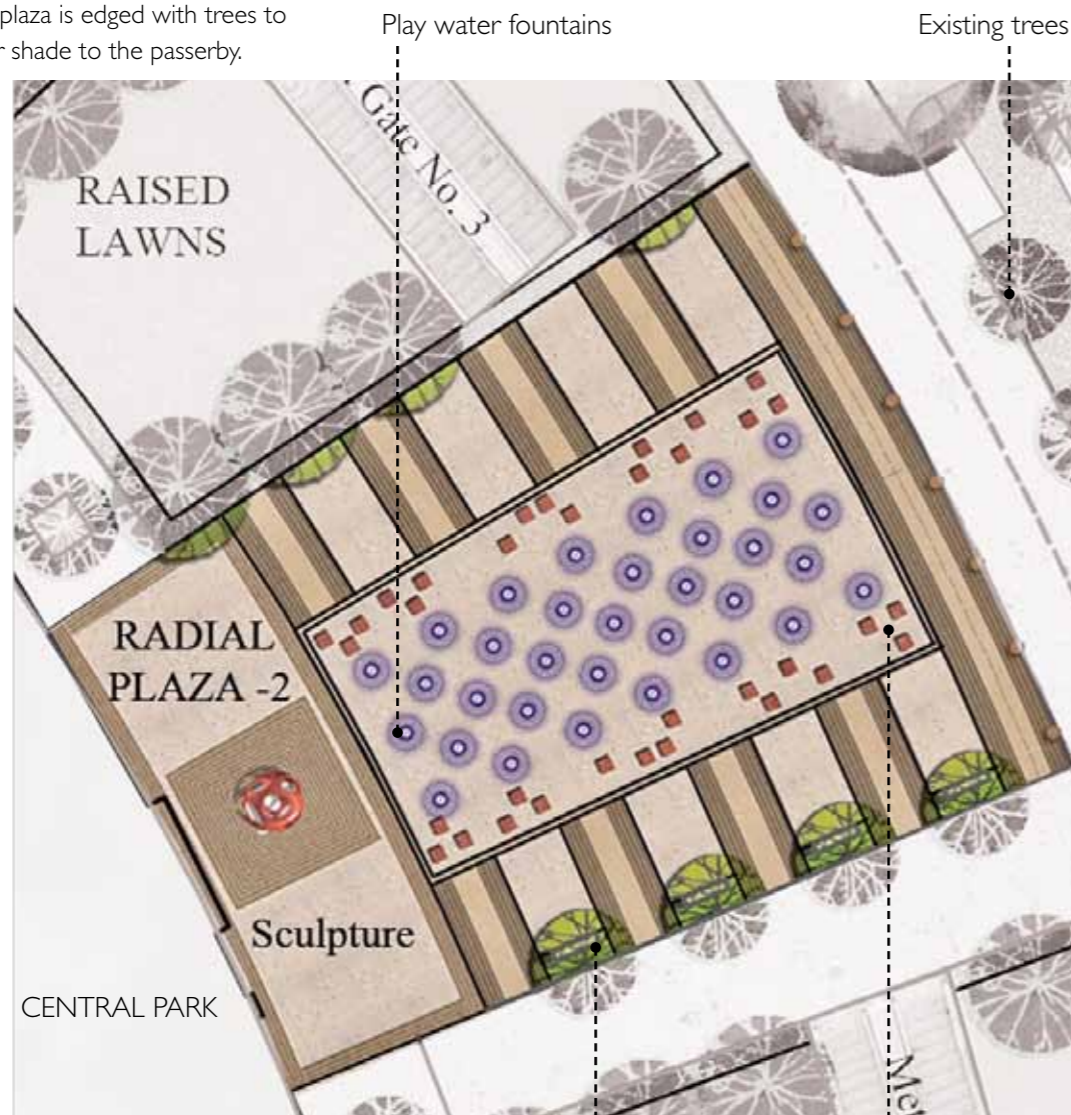
Trees with planters shade the plaza & serve as seating

RADIAL PLAZA -2

- The Radial Plaza 2 does not lead to the Central Park, it is a pause point.
- This Fountain Plaza celebrates the play of water .
- The visitors can enjoy, get wet in the fountain or even walk through the plaza without getting wet.
- These dry deck fountains are easy to maintain and the space can be used by the public even when the nozzles are shut. A drain with flushed removable drain cover encloses the water jets so that the water does not spill over the circulation area.
- The wet area is lined with seats on both sides for the visitors to enjoy the water feature.
- The plaza is edged with trees to render shade to the passerby.



View showing the Fountain plaza



Radial Plaza-2 Plan

Tree shaded benches

Seats



Prete Plaza

Image Source <http://www.rtbx.com/listing/prete-main-street-plaza-fountain.html>



Water play area of Hudson Yards park project, NYC

Image Source: <http://www.landscapeandurbanism.com/category/competitions/page/7/>

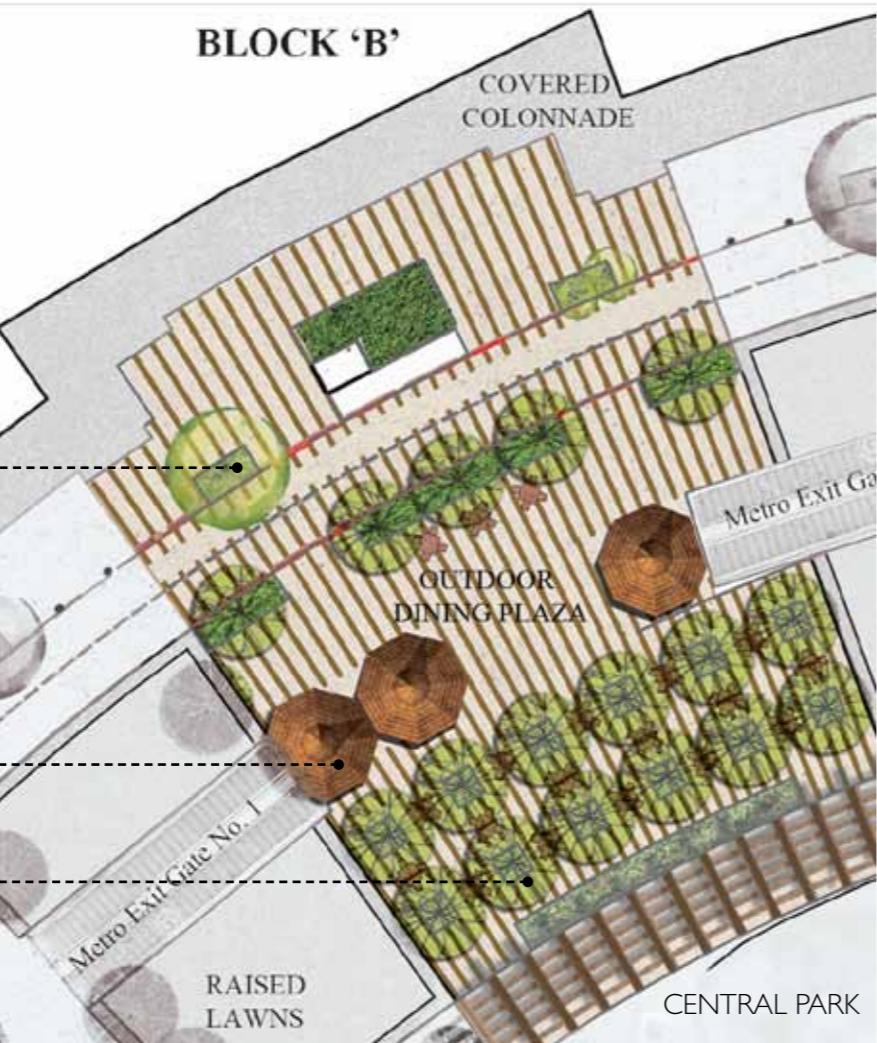
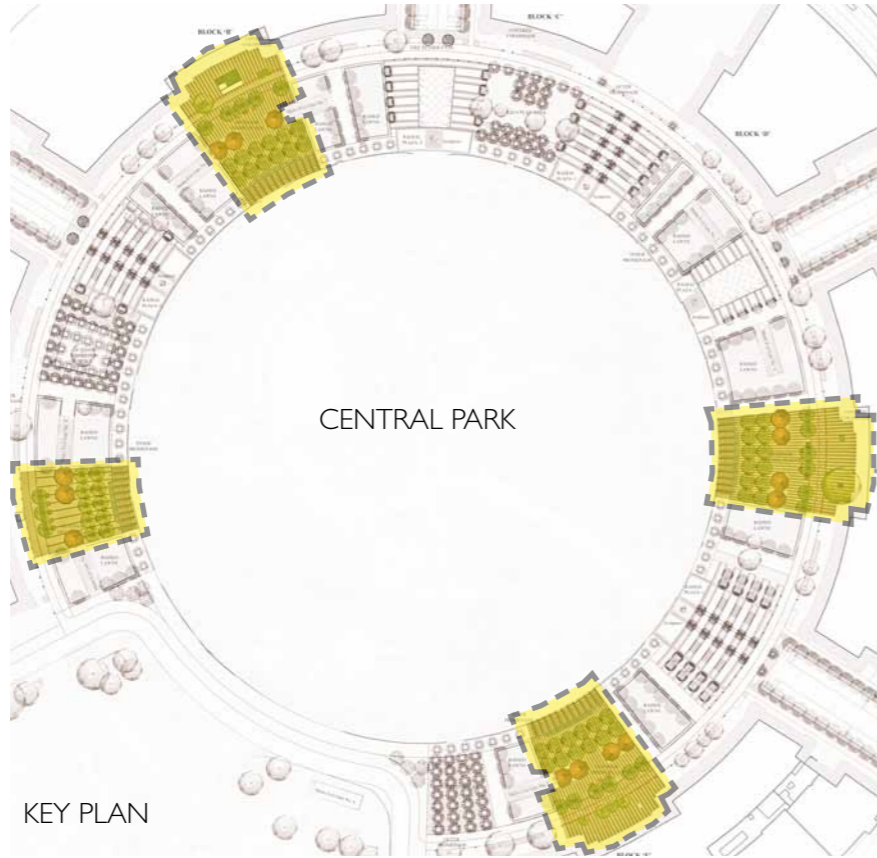


Reference Images for stone seats



OUTDOOR DINING PLAZA

- These outdoor dining spaces form the core of each block. These paved areas sit sandwiched between the metro station entry/exits, hence are easily accessible.
- These are tree shaded plazas with movable furniture and space for kiosks for the restaurants to spill over or the eateries.
- Vending zones can be incorporated in the plaza.
- The area is marked with a difference in paving material/finish. The paving type of the outdoor dining plaza would extend till the colonnade, emphasising the zone.
- Seating arrangements are proposed such that it is shaded with trees and can be used during all times of the day. Mist fans would provide respite from summer heat.
- All the furniture and planting is restricted between the fire tender path and inner promenade.
- These plazas are defined by plantation and would turn out to be vibrant meeting spaces.



Outdoor Dining Plaza Plan



This restaurant in Madrid, has placed tables under trees and umbrellas, giving it two layers of cooling shade. Though these tables are set up in a medium-sized square they take up a relatively small amount of space. The dense clustering creates a more defined eating area, and keeps the tables out of the way of pedestrians. Image Source: <https://provocationutah.wordpress.com/2012/10/03/lessons-from-spanish-cafes/>



Sony Centre
Image Source: <https://adventuresofthegypsyqueen.com/tag/sony-center/>



Prete Plaza
Image Source: <http://starvingfoodie.blogspot.in/2015/08/>

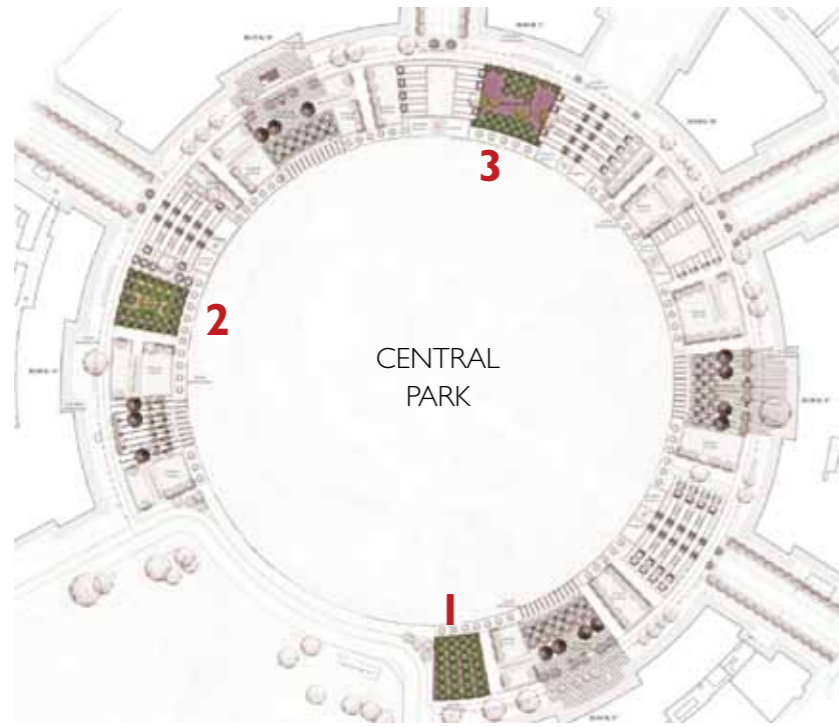


Image Source: <http://www.edsaplan.com/en/node/1178>



Proposed view of the Outdoor dining area

GRAVEL SEATING PLAZA

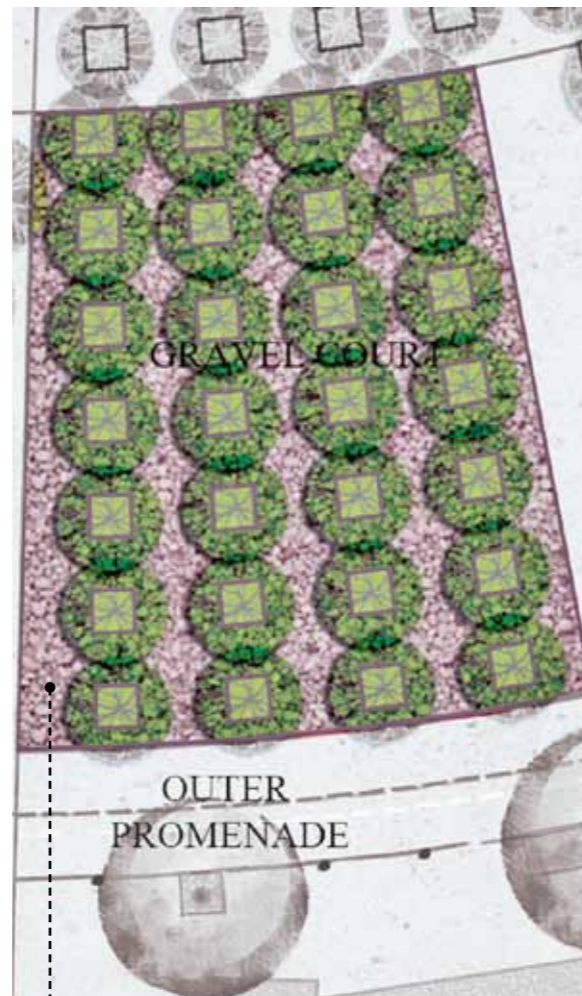


•The Gravel seating plazas are semi hard, sustainable and permeable surfaces, allow for percolation of rainwater. These are distributed evenly in the Inner circle, proposed in Block A, Block C and Block F. These shaded spaces with seatings provide setting of Outdoor Art Galleries, Space for Flea Market etc. inducing passive recreational zones in the inner circle. This inclusive plaza caters to the Children Play spaces as well.

I. GRAVEL SEATING COURT



KEY PLAN



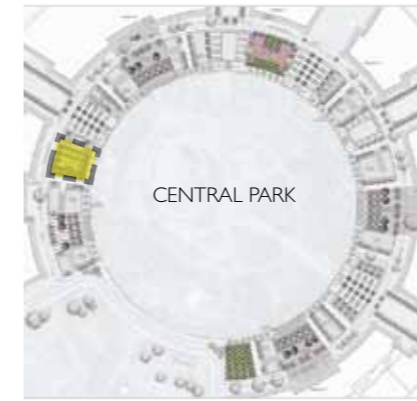
Porus gravel court with shaded seating



Reference image

The GRAVEL SEATING COURT is a quiet seating area with benches arranged along the tree grid. These would act as a pause point for the visitors and also a space for interaction and gathering.

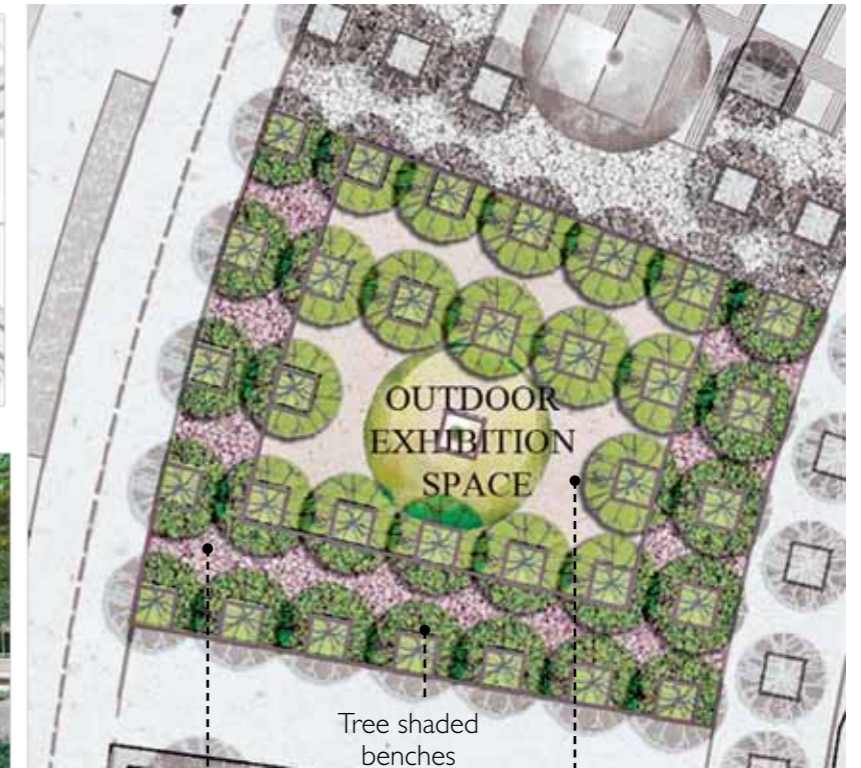
2. GRAVEL EXHIBITION COURT



KEY PLAN



Hamilton Garden, by Dan Kiley
IMAGE SOURCE- <https://tdf.org/sites/default/files/microsites/kiley-legacy/HamiltonGarden.html>



Porus gravel court

Tree shaded benches

Paved Area: Space for outdoor exhibition/ flea market



OUTDOOR/Art is in the Piazza San Lorenzo

IMAGE SOURCE- <http://www.theflorentine.net/wp-content/uploads/event/alr/art-is-in-the-square-e1462804275511.jpg>



IMAGE SOURCE- <http://www.artfaircalendar.com/a/6a00e54fba8a7388330133f345e453970b-pi>

The GRAVEL EXHIBITION PLAZA is a tree lined court with paved area in the core. Paintings, art work or installations can be exhibited along the tree grid. This would invite various artists, art collectors and visitors to the space.



Kala Ghoda art festival, Mumbai

IMAGE SOURCE- https://thecitystory.com/wp-content/uploads/2016/12/KGAF_003.jpg



Kala Ghoda art festival, Mumbai

IMAGE SOURCE- http://www.hindustantimes.com/rf/image_size_640x362/HT/p1/2015/02/06/Incoming/Pictures/1314340_Wallpaper2.jpg

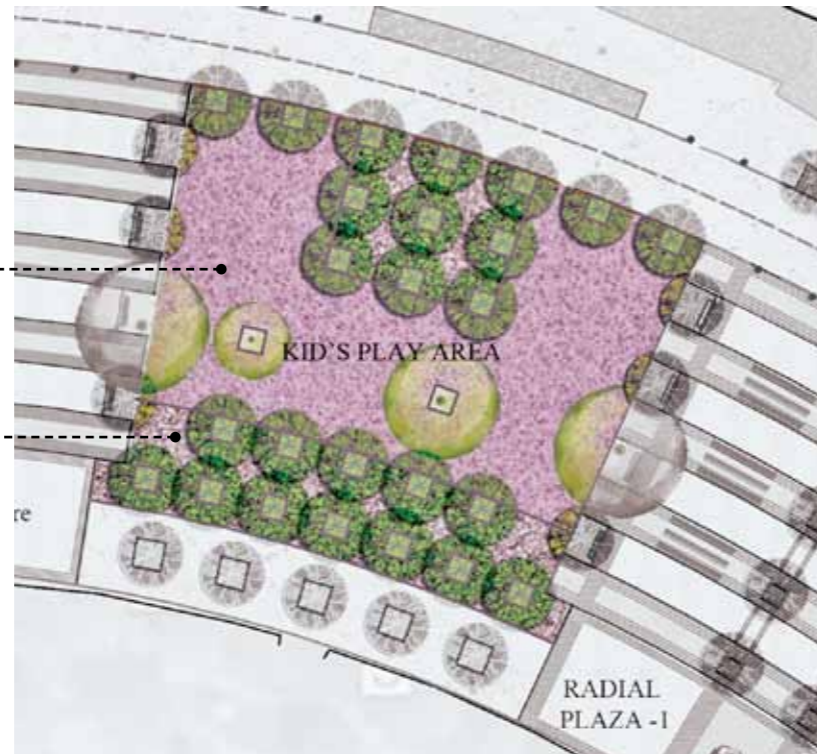
3. GRAVEL KID'S PLAY AREA



KEY PLAN



Reference image



Rubberised play mat for kid's play

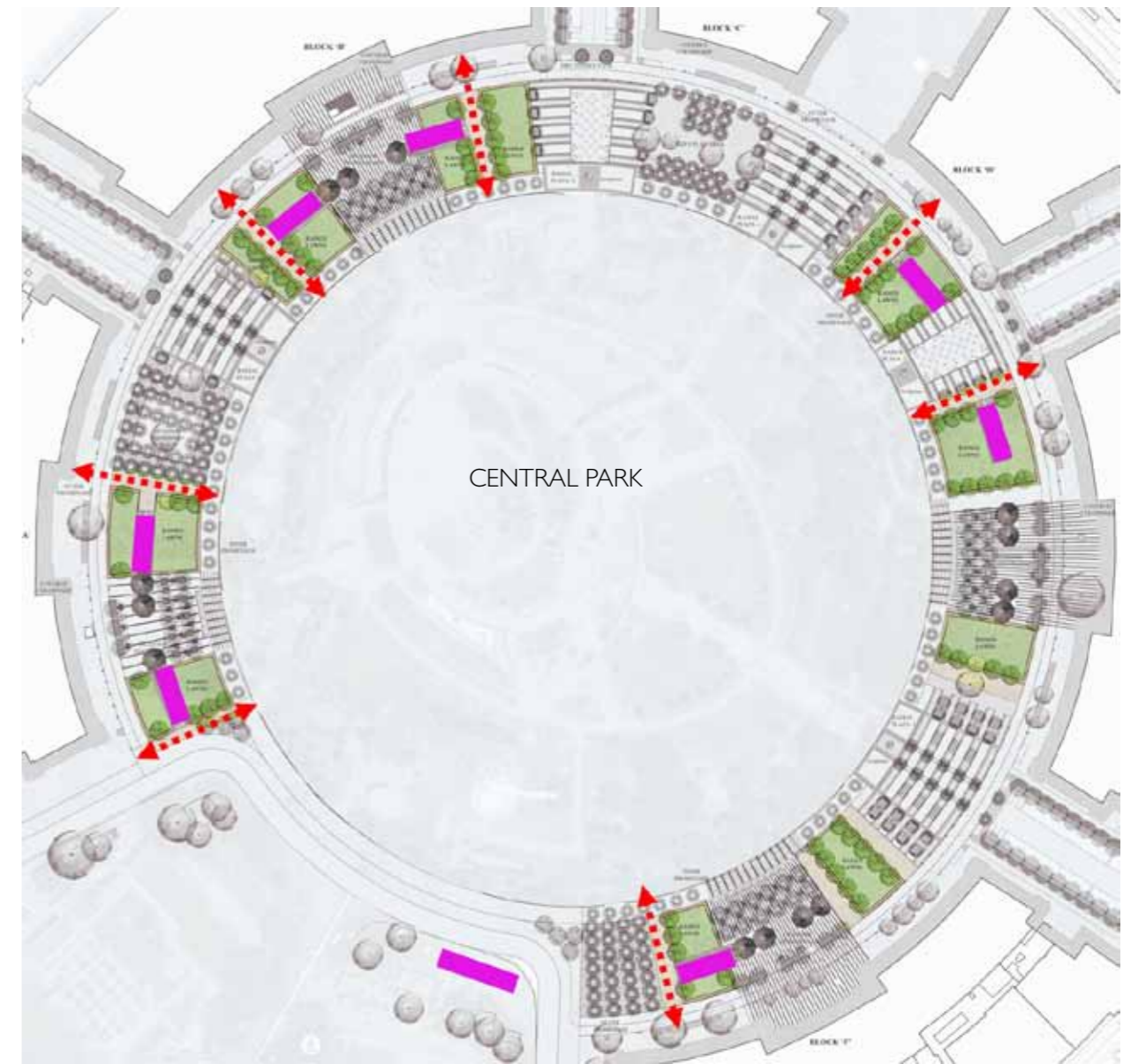
Porus gravel court with shaded seating

KID'S PLAY AREA is a gravel court accommodating seating areas and play equipment. This would be one such area catering to the kids of 1-8 years.



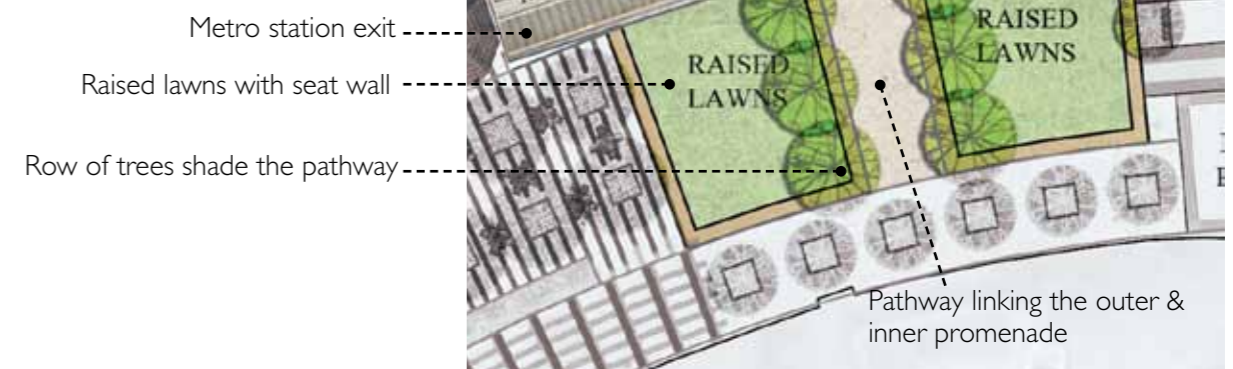
View of the Kids play area with gravel court shaded with trees

LINKAGES FROM METRO



View of the Kids play area with gravel court shaded with trees

- Raised lawns with shaded seat walls add greens to the overall texture of landscape.
- These raised greens envelope the exits of metro station and edge the links of Outer & Inner Promenade.



Metro station exit

Raised lawns with seat wall

Row of trees shade the pathway

Pathway linking the outer & inner promenade



View showing the various components of the proposed landscape scheme for inner circle



(An ISO 9001 : 2008 Certified Organisation)

दिल्ली नगर कला आयोग

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