



**Gangtok Smart City Development Limited**



**Implementation of Multi-Level Car Parking cum  
Commercial Development at Old West Point School  
Area near M.G. Marg, Gangtok – East Sikkim**

**On**

**Design, Build, Finance, Operate and Transfer  
(DBFOT) basis**

**Volume III – Project Information Memorandum**

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# 1. Introduction



Sikkim is a state in northeast India. It borders Tibet in the north and northeast, Bhutan in the east, Nepal in the west, and West Bengal in the south. Sikkim is also located close to India's Siliguri Corridor near Bangladesh. Sikkim is the least populous and second smallest among the Indian states. A part of the Eastern Himalaya, Sikkim is notable for its biodiversity, including alpine and subtropical climates, as well as being a host to Kanchenjunga, the highest peak in India and third highest on Earth. Sikkim's capital and largest city is Gangtok. Almost 35% of the state is covered by the Khangchendzonga National Park. The Kingdom of Sikkim was founded by the Namgyal dynasty in the 17<sup>th</sup> century. It was ruled by a Buddhist priestking known as the Chogyal. It became a princely state of British India in 1890. After 1947, Sikkim continued its protectorate status with the Republic of India. It enjoyed the highest literacy rate and per capita income among Himalayan states. In 1973, anti-royalist riots took place in front of the Chogyal's palace. In 1975, the monarchy was deposed by the people. A referendum in 1975 led to Sikkim joining India as its 22<sup>nd</sup> state.

The state's economy is largely agrarian based on the terraced farming of rice and the cultivation of crops such as maize, millet, wheat, barley, oranges, tea, and cardamom. Sikkim produces more cardamom than any other Indian state and is home to the largest cultivated area of cardamom and is the world's second largest producer of the spice after Guatemala. Sikkim achieved its ambition to convert its agriculture to fully organic over the interval 2003 to 2016, the first state in India to achieve this distinction. It is also among India's most environmentally conscious states, having banned plastic water bottles and styrofoam products.

Because of its hilly terrain and poor transport infrastructure, Sikkim lacks a large-scale industrial base. Brewing, distilling, tanning and watchmaking are the main industries and are mainly located in the southern regions of the state, primarily in the towns of Melli and Jorethang. In addition, a small mining industry exists in Sikkim extracting minerals such as

copper, dolomite, talc, graphite, quartzite, coal, zinc, and lead. Despite the state's minimal industrial infrastructure, Sikkim's economy has been among the fastest-growing in India since 2000; the state's GDP expanded by 89.93% in 2010 alone. In 2003, Sikkim decided to fully convert to organic farming and achieved this goal in 2015 becoming India's first "organic state".

In recent years, the government of Sikkim has extensively promoted tourism. As a result, state revenue has increased 14 times since the mid-1990s. Sikkim has furthermore invested in a fledgling gambling industry promoting both casinos and online gambling. The state's first casino, the Casino Sikkim, opened in March 2009, and the government subsequently issued a number of additional casino licences and online sports betting licenses. The Playwin lottery has been a notable success in the state. The opening of the Nathu La pass on 6 July 2006, connecting Lhasa, Tibet, to India, was billed as a boon for Sikkim's economy. Trade through the pass remains hampered by Sikkim's limited infrastructure and government restrictions in both India and China, though the volume of traded goods has been steadily increasing.

## 1.1. Gangtok



Gangtok is a city, municipality, the capital and the largest town of Sikkim. It also is the headquarters of the East Sikkim district. Gangtok is located in the eastern Himalayan range, at an elevation of 1,650 m (5,410 ft). The town's population of 100,000 are from different ethnicities such as Nepalis, Lepchas and Bhutia. Nestled within higher peaks of the Himalaya and enjoying a year-round mild temperate climate, Gangtok is at the centre of Sikkim's tourism industry.

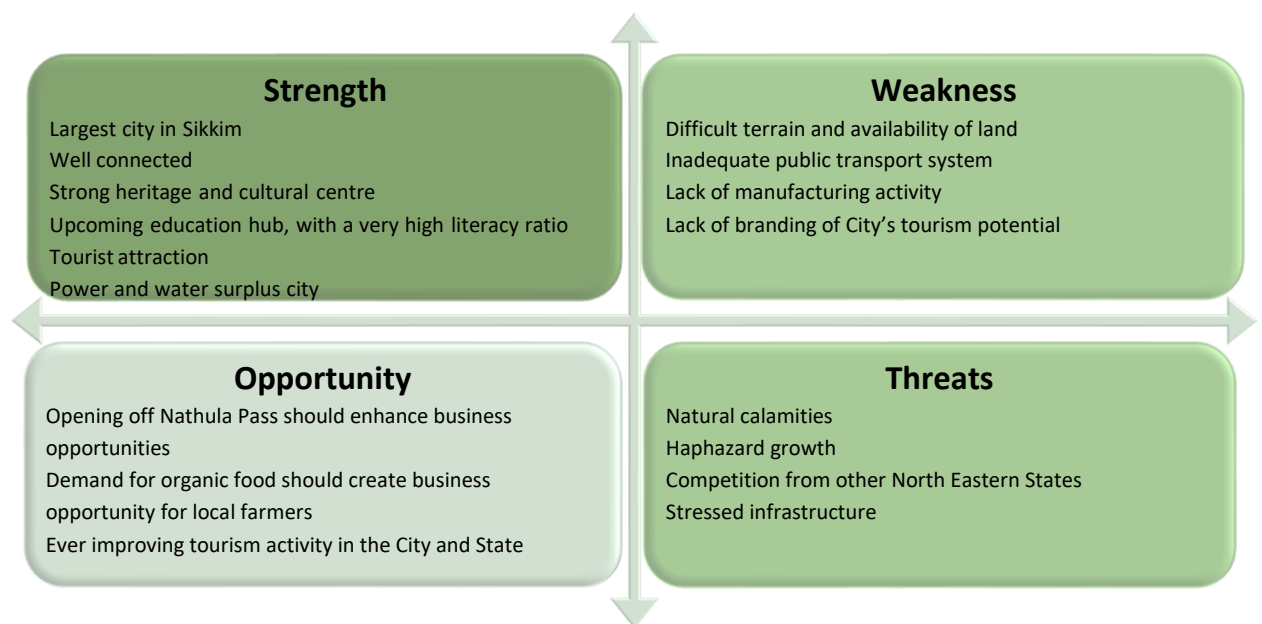
Gangtok rose to prominence as a popular Buddhist pilgrimage site after the construction of the Enchey Monastery in 1840. In 1894, the ruling Sikkimese Chogyal, Thutob Namgyal, transferred the capital to Gangtok. In the early 20<sup>th</sup> century, Gangtok became a major stopover on the trade route between Lhasa in Tibet and cities such as Kolkata in British India. Gangtok is the main base for Sikkim tourism. Summer and spring seasons are the most popular tourist seasons. Many of Gangtok's residents are employed directly and indirectly in the tourism industry, with many residents owning and working in hotels and restaurants. M. G. Marg is one of the main shopping and cultural activity streets in Gangtok. Ecotourism has emerged as an



important economic activity in the region which includes trekking, mountaineering, river rafting and other nature-oriented activities.

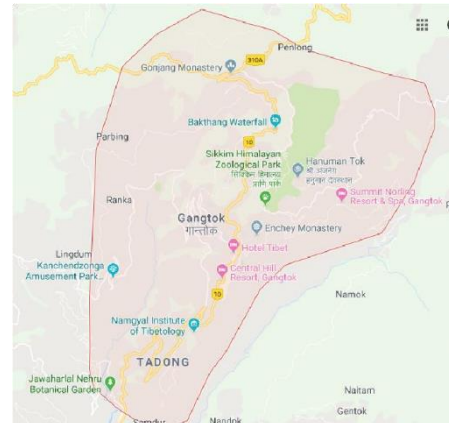
The Nathula Pass, located about 50 km from Gangtok, used to be the primary route of the wool, fur and spice trade with Tibet and spurred economic growth for Gangtok till the mid-20th century. In 1962, after the border was closed during the Sino-Indian War, Gangtok fell into recession. The pass was reopened in 2006 and trade through the pass is expected to boost the economy of Gangtok. The Sikkim government is keen to open a Lhasa–Gangtok bus service via Nathula pass.

Gangtok's economy does not have a large manufacturing base but has a thriving Cottage industry in watch-making, country-made alcohol and handicrafts. Among the handicrafts are the handmade paper industry made from various vegetable fibres or cotton rags. The main market in Gangtok provides many of the state's rural residents a place to offer their produce during the harvest seasons. The majority of the private business community is made up of Marwaris and Biharis. As part of Sikkim, Gangtok enjoys the status of being an income-tax free region as per the state's 1948 Income tax law. Following schematic depicts the SWOT analysis of Gangtok:



## 1.2. Gangtok Civic Administration

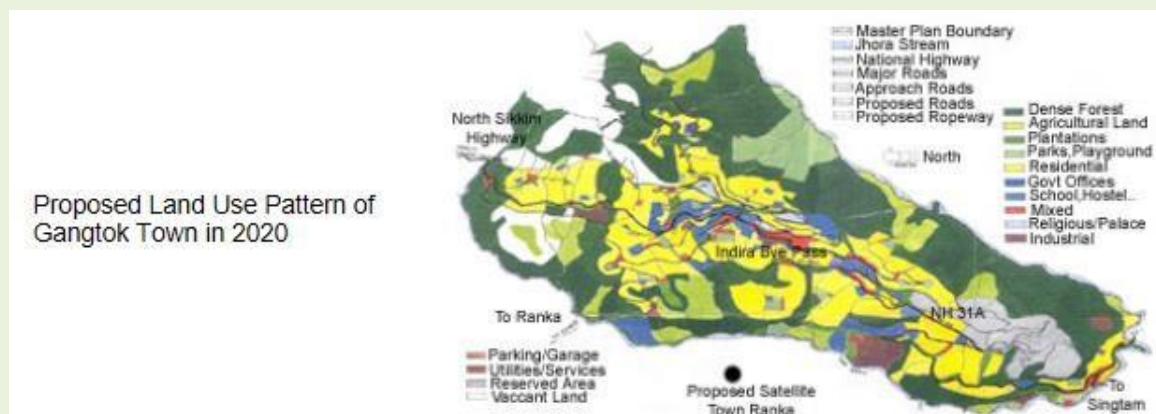
Gangtok is administered by the Gangtok Municipal Corporation along with the various departments of the Government of Sikkim, particularly the Urban Development and Housing Department (UDHD) and the Public Health Engineering Department (PHED). These departments provide municipal functions such as garbage disposal, water supply, tax collection, license allotments, and civic infrastructure. An administrator appointed by the state government heads the UDHD.



As the headquarters of East Sikkim district, Gangtok houses the offices of the district collector, an administrator appointed by the Union Government of India. Gangtok is also the seat of the Sikkim High Court, which is India's smallest High Court in terms of area and population of jurisdiction. Gangtok does not have its own police commissionerate like other major cities in India. Instead, it comes under the jurisdiction of the state police, which is headed by a Director General of Police, although an Inspector General of Police oversees the town. Sikkim is known for its very low crime rate. Rongyok jail in Gangtok is Sikkim's only central jail.

### Urban Development and Housing Department Proposed Land-use Pattern of Gangtok

Keeping in view of the rapid urbanization vis-à-vis the requirement of infrastructures, the Department has prepared the Master Plans for Gangtok town, which envisages perspective planning. These objectives can be achieved through the broad strategies being adopted by the department. Plans are being formulated to develop Gangtok Town as a Model City<sup>1</sup>.



<sup>1</sup> Source: Urban Development and Housing Department, Government of Sikkim [www.sikkim.nic.in](http://www.sikkim.nic.in)

### 1.2.1. Gangtok Smart City Development Limited

The Smart Cities Mission is an innovative and new initiative by the Government of India to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens.

The Gangtok Smart City Development Limited (GSCDL), the Authority of the Project, has been formed by the Gangtok Municipal Corporation along with Government of Sikkim to implement various area based as well as pan-city level projects under Smart City Mission. The Gangtok Municipal Corporation has entrusted GSCDL to implement the said Project. The GSCDL will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate various Smart City development projects in Gangtok.

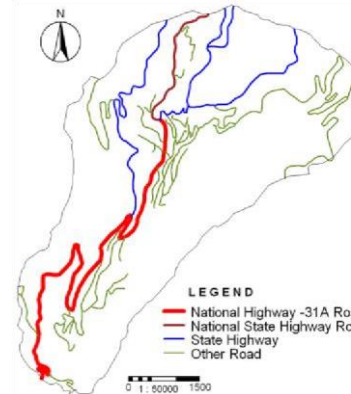
### **1.2.2. Gangtok Utility Services**

Electricity is supplied by the power department of the Government of Sikkim. Gangtok has a nearly uninterrupted electricity supply due to Sikkim's numerous hydroelectric power stations. The rural roads around Gangtok are maintained by the Border Roads Organisation, a division of the Indian army. Most households are supplied by the central water system maintained and operated by the PHED. The main source of PHED water supply is the Rateychu River, located about 16 km from the city, at an altitude of 2,621 m (8,599 ft). Its water treatment plant is located at Selep. The river Rateychu is snow-fed and has perennial streams. Since there is no habitation in the catchment area except for a small army settlement, there is little environmental degradation and the water is of very good quality.

Around 40% of the population has access to sewers. However, only the toilet waste is connected to the sewer while sullage is discharged into the drains. Without a proper sanitation system, the practice of disposing sewage through septic tanks and directly discharging into Jhoras and open drains is prevalent. The entire city drains into the two rivers, Ranikhola and Roro Chu, through numerous small streams and Jhoras. Ranikhola and Roro Chu rivers confluence with Teesta River, the major source of drinking water to the population downstream. The densely populated urban area of Gangtok does not have a combined drainage system to drain out the storm water and waste water from the buildings. The estimated solid waste generated in Gangtok city is approximately 45 tonnes per day. Only around 40% of this is collected by UDHD, while the remainder is indiscriminately thrown into Jhora, streets and valleys. The collected waste is disposed in a dump located about 20 km from the city. There is no waste collection from inaccessible areas where vehicles cannot reach, nor does any system of collection of waste exist in the adjoining rural areas. The city is under a statewide ban on the use of polythene bags.

### 1.2.3. Connectivity

**Road:** Taxis are the most widely available public transport within Gangtok. Most of the residents stay within a few kilometres of the town centre and many have their own vehicles such as two-wheelers and cars. The share of personal vehicles and taxis combined is 98% of Gangtok's total vehicles, a high percentage when compared to other Indian cities. City buses comprise less than one percent of vehicles. Those travelling longer distances generally make use of share-jeeeps, a kind of public taxis. Four-wheel drives are used to easily navigate the steep slopes of the roads.



Gangtok is connected to the rest of India by an all-weather metalled highway, National Highway 10, earlier known as National Highway 31A, which links Gangtok to Siliguri, located 114 km away in the neighbouring state of West Bengal. The highway also provides a link to the neighbouring hill station towns of Darjeeling and Kalimpong, which are the nearest urban areas. Regular jeep, van, and bus services link these towns to Gangtok. Gangtok is a linear city that has developed along the arterial roads, especially National Highway 31A. Most of the road length in Gangtok is of two lane undivided carriageway with footpath on one side of the road and drain on the other. The steep gradient of the different road stretches coupled with a spiral road configuration constrain the smooth flow of vehicular as well as pedestrian traffic.

**Rail:** The nearest railhead connected to the rest of India is the station of New Jalpaiguri in Siliguri, situated 124 km away from Gangtok. Work has commenced for a broad-gauge railway link from Sevoke in West Bengal to Rangpo in Sikkim that is planned for extension to Gangtok.

**Air:** Pakyong Airport, a Greenfield project near Gangtok, was commissioned in 2018. It is the first and only airport in Sikkim.

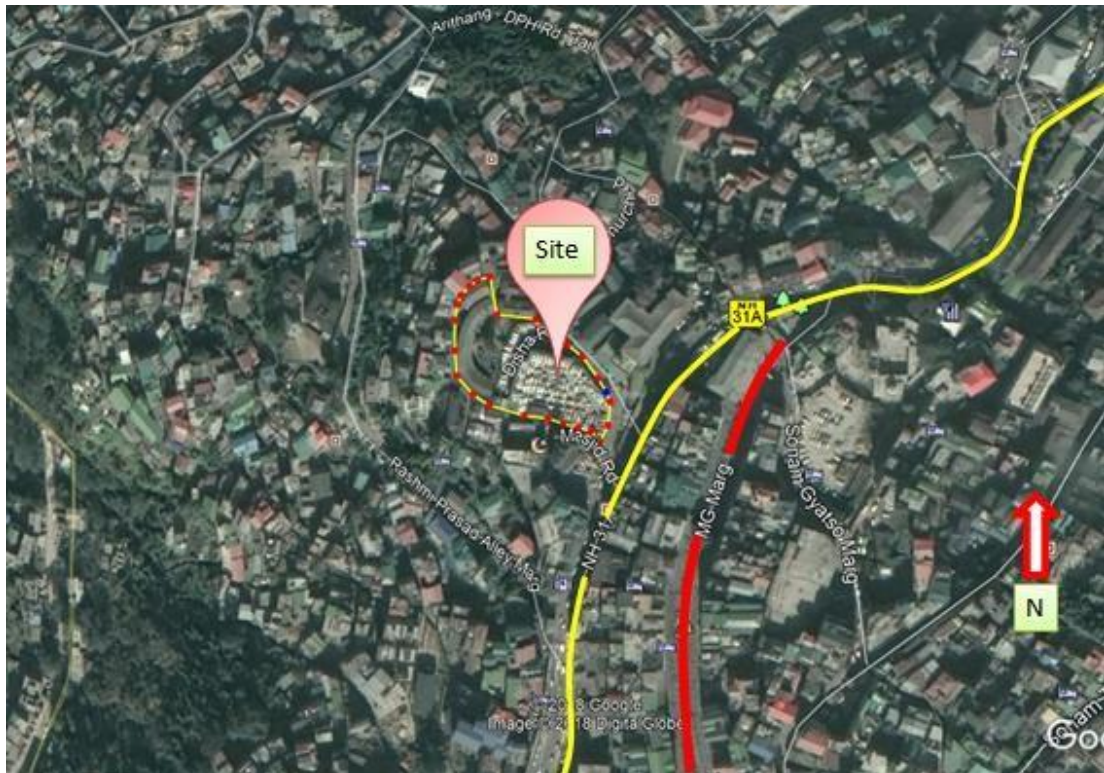
## 2. The Project Site

Parking is an essential component of any city's transportation system. Managing public and private parking spaces is an integrated aspect of a planned urban transportation system. This plays an important role in increasing the capacity of existing roadways, improving traffic circulation and reducing urban chaos in the city. The unprecedented growth in the number of motor vehicles, especially the taxis and cars along with the concentration of activities has led to acute parking problems in the Gangtok City area. As the road space is limited and On-Street parking is not possible on all roads, parking demand far outstrips the supply equation. Moreover, there are limited parking lots leading to spill-over of on-street parking on the main carriageway and impeding the movement of the traffic stream.

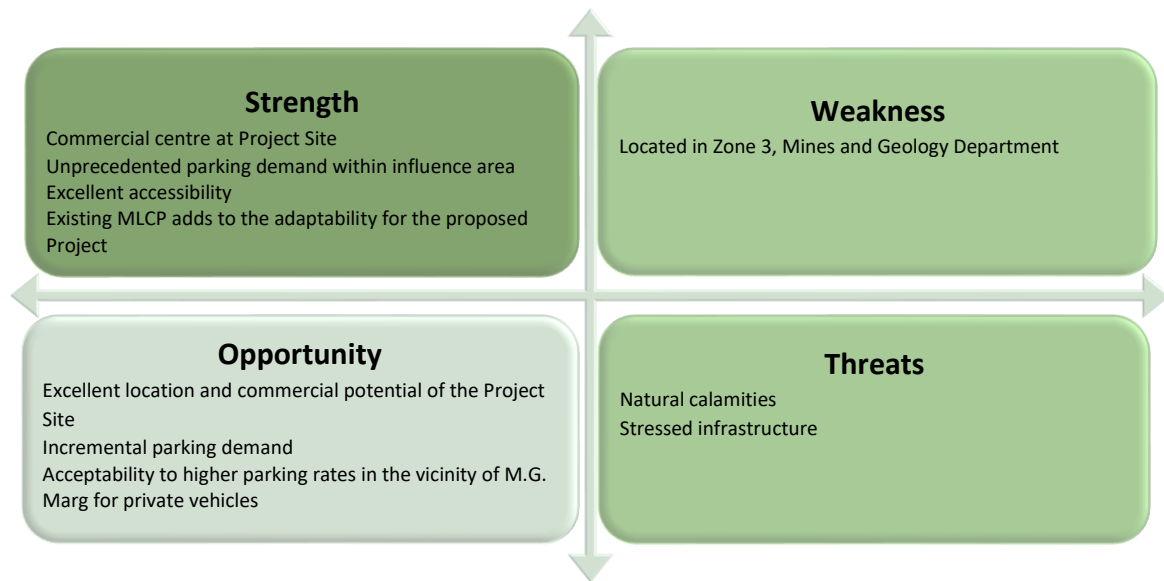


Accordingly, GSCDL, under smart city program has identified various Multi-Level Car Parking projects to be implemented on priority. Under the program, GSCDL has identified an existing MLCP, which will be demolished and upgrade into a state of the art, modern MLCP cum Commercial Development at Old West Point School Area near M.G. Marg on a DBFOT basis.

## 2.1. Project Site



The identified Project Site of about 4,600 Sqmtr. is the existing MLCP, without any commercial development at Old West Point School area near M.G. Marg, which is located in the heart of the city of Gangtok, adjacent the busy NH 31-A and M.G. Marg market. The existing MLCP houses majorly taxi parking along with private car parking. Plot area of the Project Site is 4,600 Sqmtr. The pre-dominant landuse in the vicinity of the Project Site is commercial with limited shops on the ground floor and hotels on upper floors of the buildings. As per stability map prepared by Mines and Geology Department, Gangtok, the site chosen is located in Zone 3. following Schematic depicts the SWOT assessment of the Project Site location.



### 2.1.1. Access to the Project Site

The Project Site has an excellent access two roads, i.e. from the NH 31-A from east and Church Road on the North. The main access is from the NH 31-A. The existing MLCP structure is built on the natural land slope with Ground level and -1 levels accessible from NH 31-A. Level G-2 is accessible from Church road from North side of the MLCP. The exit from Level G-1 is at Church road with linkage to NH31A as well. Following snaps shows the access roads discussed above:



**Access from Church Road**



**2.1.2. Parking inside existing MLCP**

The existing parking facility is being used by long route intercity taxis as well local taxis and private vehicles. Level G-1 and G-2 are being mainly used by long route taxis. However, local taxis use almost 1/4<sup>th</sup> of the parking bays on Level G-1 and private vehicles mainly use level G-2 for parking. While ground floor mostly witness mix parking with Cars/ jeep/ taxis and private vehicles, 2-wheelers are also seen parked on ground floor level i.e. NH 31-A level. Figures below depicts the parking conditions within various levels of the existing MLCP:

**Parking at NH 31-A level**



**Parking at G-1 Level**



**Parking at G-2 Level**



As it can be seen, at present, no proper parking bay system is being followed at the existing MLCP. Due to overspill of demand, the parking facility is under tremendous pressure and operates beyond its capacity. As such, even the parking aisles are used for parking wherein cars continuously shifted to give way to an incoming or outgoing vehicle.

### **2.1.3. Passenger and other infrastructur facilities**

The existing MLCP is of very basic nature in terms of passenger amenities and other infrastructural facilities with poorly maintained public toilet and an unplanned passenger waiting area. In absence of a regularised canteen, many unorganised eatery points are operational, mostly at level G-1 and level G-2. Levels G-1 and G-2 are connected by staircase within the building footprint. Although a passenger enquiry counter is operational, no IT based information system is in place. Signages, rate card and in & out terminals are missing at all levels.

Currently most of the users are not satisfied with the manual ticketing management system. Private vehicle owners, while are satisfied with the parking rates (during office time and night charges), they are generally unsatisfied with the overall management system. The maintenance of the MLCP is another prominent issue reported by the users. The existing building is not being maintained as per good industry standards, with issues pertaining to cleanliness, proper illumination and other safety aspects.

## 2.2. Parking demand at Project Site

The existing demand at the proposed Project Site has been estimated at 280 vehicles in peak hour, with 91% of 4 wheelers (cars/Jeeps) and only 9% of two wheelers. The corresponding peak hourly demand is about 260 ECS. Reconnaissance survey for the proposed MLCP site was carried out on December 04, 2018 and on-site parking survey was conducted on December 05, 2018. On-street and off-street parking surveys were carried out to acquire data on parking accumulation, duration and parking turnover. This information is utilized to infer the demand for parking and the extent of the parking required in terms of the number of equivalent car spaces (ECS) to be built. Primary surveys were carried out to obtain information on:

- ✦ Parking Accumulation
- ✦ Parking Duration
- ✦ Parking Turnover

### 2.2.1. Parking accumulation

Manual counting has been done at different hours of the day to ascertain the parking accumulation at the existing facility. The actual holding capacity of the existing site is 165 ECS (Equivalent Car Spaces). The accumulation survey reveals the existing facility is being operated beyond its capacity. For the purpose of understanding of the on-street parking scenario in the vicinity of the Site survey had been carried out at the Tibet Road, with following results:

Parking Survey Count	Nos.	Composition
Private Cars	88	33%
2 Wheelers	25	9%
Local Taxi	80	30%
Long Route Taxi	75	28%
<b>Total</b>	<b>268</b>	

Time	Cars	Two Wheelers	Jeeps	LCV	Heavy Trucks	Total Vehicles	Hourly Accumulation
9:00 - 9:30	15	0	15	0	0	30	9:00 - 10:00 31
9:30 - 10:00	16	0	15	0	0	31	9:30 - 10:30 39
10:00 - 10:30	20	0	19	0	0	39	49
10:30 - 11:00	25	0	24	0	0	49	58
11:00 - 11:30	29	0	29	0	0	58	64

11:30 - 12:00	31	0	33	0	0	64	10:00-11:00	64
							10:30 - 11:30	
							11:00 - 12:00	
							11:30 - 12:30	
<b>Time</b>	<b>Cars</b>	<b>Two Wheelers</b>	<b>Jeeps</b>	<b>LCV</b>	<b>Heavy Trucks</b>	<b>Total Vehicles</b>	<b>Hourly Accumulation</b>	
12:00 - 12:30	33	0	26	0	0	59		59
12:30 - 1:00	34	0	25	0	0	59		59
1:00 - 1:30	28	0	26	0	0	54		54
1:30 - 2:00	24	0	16	0	0	40		50
2:00 - 2:30	29	0	21	0	0	50		57
2:30 - 3:00	31	0	26	0	0	57		57
3:00 - 3:30	26	0	29	0	0	55	12:00 - 13:00	55
3:30 - 4:00	34	0	21	0	0	55	12:30 - 13:30	56
							13:00 - 14:00	
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							14:30 - 15:30	
							15:00 - 16:00	
							15:30 - 16:30	
							16:00 - 17:00	
							16:30 - 17:30	
							17:00 - 18:00	
							17:30 - 18:30	
4:00 - 4:30	31	0	25	0	0	56		56
4:30 - 5:00	32	0	22	0	0	54		54
5:00 - 5:30	22	0	20	0	0	42		47
5:30 - 6:00	23	0	24	0	0	47		47
6:00 - 6:30	17	0	21	0	0	38	18:00 - 19:00	38
6:30 - 7:00	16	0	22	0	0	38		

## 2.2.2. Parking duration

Following is the result of on-street parking survey conducted at Tibet Road, near Project Site for understanding the parking duration:

Classification of Duration of Parking				
S. No	Duration of Parking	Designation of Parking	Survey Count Info	%age
1	< 1 Hour	Very Short Duration	160	37%

2	1 to 2 Hours	Short Duration	143	33%
3	2 to 4 Hours	Medium Duration	54	13%
4	4 to 6 Hours	Long Duration	31	7%
5	> 6 Hours	Long Term Parking	42	10%
<b>Total</b>			<b>430</b>	<b>100%</b>

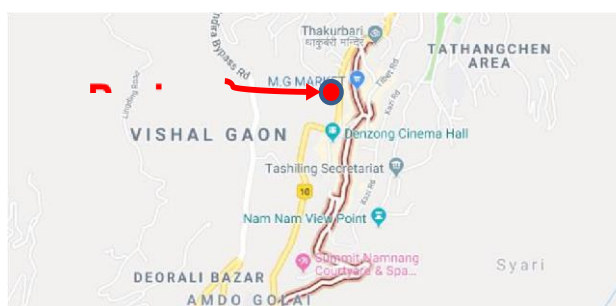
### 3. Commercial Development

#### 3.1. Project Site – Vicinity to M.G. Marg



M.G. Marg is a 'must visit' place in Gangtok and this is the town center of the hill town. M.G. Marg is also the main market area of Gangtok. The road and the area around it has transformed over the years. It is now more like a long stretch of open mall or boulevard square where locals and tourists take leisure stroll or just sit and relax on one of the many benches laid along the middle and both sides of the road to soak in the ambience.

The road is lined up with glittering shops, restaurants, cafes & bars on both sides. Many tourists take a table on a roadside restaurant and watch the activities on the street. It's like a carnival like atmosphere out here. In line with government's green initiative, all buildings on both sides of this road are painted green. The Statue of Unity



overlooks MG Marg. The statue comprises of the figures of Bhutia Chieftain Khye Bumsa, the Lepcha leader Thetong Tek and his wife Ngo-Kong-ngol. The statue depicts peace, love and harmony. About midway is an imposing statue of Mahatma Gandhi. There are Victorian lamps

along this road. When lit up after dark, the entire place looks magical. As part of Gangtok Annual Food and Culture Festival that takes place in the month of December, many different food stalls are set up at the Titanic park in MG Road, cultural shows take place here opposite to Sikkim Tourism & Civil Aviation Department where ethnic dance performances and musical shows are organized.

### **3.2. Allowed Commercial Development**

The Concessionaire shall be entitled to construct/ develop such components which it deems appropriate from commercial viability point of view provided however that such component does not fall in the category of prohibitive item as per Authority or GoS or GOI norms or applicable law. Following are the Optional Development components permissible within Commercial Development:

- ⑦ Shopping Mall
- ⑦ Multiplex
- ⑦ Hotel
- ⑦ Food Courts/Restaurants/ coffee shop
- ⑦ Commercial (Retail cum Office) Area would include retail shopping, branded showrooms, anchor stores, Entertainment Complex/ Zone and business spaces
- ⑦ Banks
- ⑦ Coaching Institutes
- ⑦ Gaming Zone/children play home
- ⑦ Gymnasium or Health Centre
- ⑦ Any other activity with the approval of Authority

### **3.3. Restricted Commercial Development**

Following functions / products are not permitted for development:

- ⑦ Industrial activities
- ⑦ Hostel
- ⑦ Warehousing (except such warehousing facility which is incidental to the use of the Project)
- ⑦ Wholesale Activity
- ⑦ Car Service Garage
- ⑦ Workshops
- ⑦ Hospitals or health centers
- ⑦ Other environmentally incompatible functions



## **4. Project Site Map**

(to be incorporated)