COMPETITIVE MARKET CONDITIONS: HOSPITALITY IN THE UPSMARKET NEIGHBORHOOD OF JUHU

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Abstract

Sustainable development (SD) was defined for the first time in 1987 in the report “Our common future” as “Development...that...meets the needs of the present without compromising the ability of future generations to meet their own needs”. In today’s competitive business environment where technology pays a large role in enabling the business to be held locally and overseas, it becomes easier to win customers. The goal is to focus on productivity by generating more sales and margins compared to its market rivals.

By continuously keeping a balance among the social and economic dimensions, this paper will focus on the need to extend an already existing management system or develop a new one in order to improve sustained development as well as cover the principles of sustainable development to achieve the factor of sustainability in the changing market scenario.

Market delineation and Sustainability Analysis of Juhu to identify the most profitable and competitive use of real estate property such as hospitality which is legally and physically possible, financially feasible, maximally productive while the micro-market should be able to absorb this property to show its highest value in terms of use and profitability to the investor as well as stand at large in fulfilling the major aspect of sustaining.

Keywords: Feasibility, Sustainability, Market delineation, financial feasibility.
Background

Feasibility and sustainability report focuses on highest and best use of a potential site in Juhu. The site selection is done by analyzing property productivity & market delineation through gravity model, time distance model, Huffs model, etc.

Estimating and analyzing the Demand and Supply of the market is done for different real estate segments such as residential, commercial, retail & hospitality. Financially validating the different forms of real estate and creating scenarios which also include analyzing the discounted cash flows, NPV- Net Present Value, and IRR- Internal rate of return.

Finally we have proposed property with highest NPV, IRR, BCR, Payback period which is supported by risk, sensitivity and scenario analysis that accounts for stating a certain real estate’s sustainability in the changing market scenario which is feasible in terms of the micro-market, operation and financially.

Introduction

Mumbai, being the hub of finance and a city of multi- culture has been one of the fastest growing cities of India with the various pockets showing their uniqueness in their own effective way. Juhu is one among the opulent pockets of Mumbai. It is a combination of residential, commercial, unorganized retail, hospitality and film studios and is famous for beach, beach vendor’s snacks, film shoots, restaurants, pubs and celebrity residences. The report is on highest & best use study of a potential site in Juhu which is one of the important and developed micro markets of Mumbai and finding land parcel here becomes difficult. The Development Plan 2034 shows varied pockets of Juhu up for redevelopment. The proposed site remains hypothetical and the selection of this lead to the following objectives mentioned below.

Research objectives

- The evaluation and analysis of a proposed project to determine and technically suffice with supportive data if it is practically realistic, is within an estimated cost and if it is going to be profitable in the near future.
• Well evaluated and designed management feasibility will take into account the target market and the consumer behavior with the sole purpose of sustaining in the changing market scenario.

• Studying Juhu in terms of various developments and trends in terms of infrastructure, residential, commercial and hospitality.

• Analyzing the gap between demand and supply becomes essential.

• This helps us to determine if the project has the potential for sustaining thus leading to gain potential investors by showing a financial model.

**Study area**

The boundary below marked in red on the map is the demarcation of Juhu’s study area that is considered to analyze various factors of development as per land use and the demand-supply within the micro-market that is spread across 437 sq. km. The site is of 10 acres and is hypothetically chosen with part of the site where Hotel Tulip Star exists and part of it has mixed land pattern.

*Figure Google Earth image showing the extent of Juhu, Figure Google Earth image showing the extent of site the site and natural barriers*
Methodology

Market analysis in the appraisal process has two basic functions with the first analysis that provides the data input to identify the highest and best use of property and the second major function is to provide data input and identify the key factors of value that are to be measured by applying the three approaches to value i.e., the property use, market support and timing (absorption rate) and market participants who are the probable users and buyers.

Two steps of analyzing the micro-market:

- Market Delineation report
- Feasibility report
Demographics

As per the Primary survey in the study area and Census 2011 data (https://www.census2011.co.in/) and ward wise population, following are the highlights of demographics:

- As per census reports ward wise population for year 2011 is for K/W ward is 749000 and micro market (Juhu) population is 99002. Calculating future population for study area by arithmetic mean for year 2018 is 119140 by considering the density as 29700 p/ sq. km.
  
  - Figure 4 Population Growth, Figure 5 Population Growth Potential

- Slum population 15190
- Household size 4.3 persons/household
- Population density is 29700 p/sq.km Figure 6 Total Population: Literate Population
- Sex ratio 720:1000; as per Census 2011 Section 51, Juhu has the lowest sex ratio compared to other 50 sections of District. Figure 7 Sex Ratio
- Literacy rate is 89.7% Table 1Literacy Rate
- Work participation ratio 58% of total population are workers where as 42% of total population are non-workers. Figure 8 Work Participation Ratio
- 0-6 age group sex ratio 901:1000 with actual number 3696: 4104. Figure 9 Age Make up(0-6 age)

Regional linkage

The land parcel of 10 acres is situated at the junction of B. P. Patel Chowk and the connectivity of this to various other micro-markets is by bus, car, taxi and by local train from Vile-Parle and Santa Cruz being the nearest stations at 5.5 km and 4.9 km respectively, see Figure 10 Link to surrounding micro-markets (en.m.wikipedia.org)

The map shows the nearest areas within 8 km which could be visited by the locals and tourists for reasons as mentioned below:
Economy

- Large number of Hotels, Restaurants and cafes add to uplift hospitality in Juhu leading to the major economy of this area.
- High income group businessmen, Bollywood stars create center of attraction thus making an impact on the lease rent business. This also directly impacts on the increase in property prices. *Figure 12 Juhu Location Map* (Google Earth)

Development planning and municipal/ urban authorities

- Juhu comes under the urbanizable zone excluding the Juhu aerodrome, residential land prices between Rs.225000- 400000 per sq.m. and Net Bulk FSI ranging from 1.33- 2.7 (2012) as per the Draft DP 2034.
- As per DCR; with main road width of 20 meters, i.e., Juhu- Tara Road: Base FSI- 1, Additional FSI- 0.5, TDR- 0.9. Hence total FSI= 2.4
- Land parcel comes under Airport Authority of India.
- Coastal Regulation Zone - III A area
- Therefore, area up to 50 m from the high tide line on the landward side is applicable as the NDZ (No development zone). The selected land parcel is 120m (approx.) away from the high tide line thus making it applicable for development.
- Based on International Civil Aviation Organisation (ICAO) standards (2014), residential buildings within 2.5 km of the Juhu Airport should be 49.87 m or 15-floor high and commercial should be even lesser. (reference: timesofindia.com)

Income groups

- “Nearly 80% of Mumbai’s Households belong to the economically weak, low-income and middle-income categories
- 50% of Mumbai’s households earn less than Rs.20,000 per month” (MHADA Report). *Table 2 Income Groups*
Table 3 Income Groups

| Income Groups   | Monthly Household Income | Yearly Income In Lakhs |
|-----------------|--------------------------|------------------------|
| Low-Income      | 16,001-40,000            | 1.92                   |
| Middle-Income   | 40,001-70,000            | 4.8                    |
| High-Income     | ≥ 70,001                 | 8.4                    |

Infrastructure Development

Physical Infrastructure

**Vascoa-Bandra Sea Link**
- One link of this sea link connects via Lake Koliwada area & connects to the Western Expressway via Milan Flyover

**Metro Rail Buffer 0.5 km**
- This metro rail has stations at Koliwada, Santa Cruz, Vile-Parle, Andheri etc.

![Figure 13 Vascoa-Bandra Sea Link Project](www.mrdc.org)

Social Infrastructure

- Educational Institutes
- Health Care
- Temples

![Figure 14 Social Infrastructure](Google Earth)
Feasibility report

Traffic and transportation

Number and type of vehicle

Primary Survey: 15 minutes observation (on 20th October, 2018; Sunday) of type and number of vehicles passing around our land parcel which is at a junction of 3 main roads and one secondary road.

Level of street congestion

On the basis of Primary survey, Secondary survey was done from which we can derive that the Juhu-Tara road was less congested when compared to Swami Vivekananda road assuming that the Juhu-Tara road was mostly used by the residents, others, etc and Vivekananda road was used by everyone to travel towards Andheri, Khar and Kurla which are majorly Commercial Office Spaces.

STRENGTH | WEAKNESS | OPPORTUNITY | THREAT

Strength

- Prime location: Hospitality & Residential
- Presence of beach
- Close proximity to airport and 3 stations
Weakness

- Development not possible in the east due to Juhu Aerodrome
- CRZ stipulation
- Lack of organized retail
- Absence of Industries & IT

Opportunity

- Increase in investments
- More footfall of tourists and businessman
- Slum redevelopment

Threat

- Presence of land parcel at node/ junction which has high possibility of traffic agglomeration.
- Nala from slums flow into the Juhu beach hence, need for STP.

Objective

The primary objective of study is trade area analysis for residential and Hospitality development in Juhu micro market and to check future prospect of new residential and hospitality development in micro market.

Feasibility report

Property productivity analysis

Land Parcel is 10.61 acres. Beach is on the rear side of property. Property is 120m from High tide line. Terrain lies at 58 feet from sea level as per Terrain map Figure 15topographic-map.com

- Already existing Tulip Star Hotel can be used with alteration in infrastructure in case a hospitality project is taken up
Residential demand – supply analysis

Demand estimation

Based on population demographics and secondary data collection and as per Stephen F. Fanning’s scientific model of housing demand estimation. Demand is calculated by considering employment generation, income data and number of households in the market area.

Demand for new housing units = \((cH+nR)-(Va-Vn)-(UCa-UCn)\)

\(cH\) = change in the number of households in the community or market area over a given period

\(nR\) = net removals of units (demolitions) from the housing inventory

\(Va\) = actual vacancies

\(Vn\) = frictional vacancy (normal vacancy in balanced market)

\(UCa\) = actual housing units under construction

\(UCn\) = the normal (average) number of units under construction

Population of micro market is 121000 and 4.3 is the number of persons per household in the micro market area.

\(cH = 121000/4.3 = 28140\) new households

\(nR = 0\)
Va = 116 units vacant
Vn = units fractional vacancy (5% of total units) = 0
Uca = units actually under construction = 640
Ucn = units normally under construction = 0
(28140+0) - (116) – (640) = 27384
New housing units in demand over the next five years is 27384
ASSUMPTIONS (for Maximum development for Product mix Design)
Plot Area- 42937.14 sq.m
FSI- 2.40
Permissible Built up- 77286.85 sq.m

| Product Mix Design |        |
|-------------------|--------|
| **2 BHK**         |        |
| No. of Flats      | 184    |
| Saleable Area     | 682.43 sq.ft/Flat |
| **1 BHK**         |        |
| No. of Flats      | 116    |
| Saleable Area     | 424.62 sq.ft/Flat |
| **3 BHK**         |        |
| No. of Flats      | 36     |
| Saleable Area     | 1213.21 sq.ft/Flat |

Existing supply

As per primary survey Heena group of companies, Span group, Legend Siroya, Ahuja group, Bharat Infrastructure and engineering, M.L. Group of companies are some of prominent groups in this area. Following table showing price range and area in sq.ft.
Table: Residential Property Price (www.housing.com)

| Typical    | Price Range (Rs.) | Area (sq.ft.) |
|------------|-------------------|---------------|
| 1BHK Flat  | 73.80L-1.72Cr     | 345-800 sqft  |
| 2BHK Flat  | 2.25Cr-5.25Cr     | 670-1500 sqft |
| 3BHK Flat  | 3.83Cr-8.94Cr     | 1100-2560 sqft|
| 4BHK Flat  | 8.22Cr-19.18Cr    | 1800-4290 sqft|
| 5BHK Flat  | 8.58Cr-20.02Cr    | 2500-5000 sqft|

Property price trend

![Property price trend graph](image)

Hospitality demand supply analysis

To do trade area analysis for Juhu micro market and understanding sustainability of Hotel project through primary and secondary studies. Following are the probable reasons for occupancy in the hotels of Juhu.
**Business point of view:**

- Central point with respect to visiting IT and Office Spaces.
- Close to International Airport
- Close to restaurants in Juhu

**Tourism point of view**

- Close to beaches- Juhu, Versova
- Close to International Airport
- Close to restaurants in Juhu

| Hotels (within 1km radius)       | No. of rooms & Price range | Vacancy Rate % |
|----------------------------------|-----------------------------|----------------|
| Hotel Beach Garden                | 25; Rs.3,200-3,500          | 80             |
| JW Marriot, Juhu                  | 326; Rs.10,800- 15,900      | 70             |
| Hotel Bawa Continental           | 32; Rs.4,600- 8,500         | 70             |
| Hotel Sea Princess               | 111; Rs.6,500- 8,500        | 80             |
| Novotel Mumbai                   | 203; Rs.6,500- 20,000       | 80             |
| Treebo Sea Side                  | 35; Rs. -2,700- 5,100       | 70             |
| Oyo 15740 Rest Inn               | 8; Rs.2,400- 3,500          | 90             |
| Hotel Juhu                       | 15; Rs.4,000                | 80             |

**Table Hotels in the micro-market**

- Room demand in business destinations - Mumbai, demand is expected to grow at a moderate rate of 9% supply and 7% CAGR respectively.

- While OR is expected to increase by 400 basis points to 68%, ARR (avg. room rate) is estimated to increase by CAGR of ~2%. As a result, RevPAR (revenue per available room) in business destinations is expected to rise by %CAGR to Rs 5,500 till fiscal 2022. Following table showing comparison of top 8 hotels out of 24 in the micro-market with highest and lowest accommodation price along with number of rooms.
Hotel Price range in Juhu

- As per IBEF Report Growth of Tourism & Hospitality Industry (IBEF Report Growth of Tourism & Hospitality Industry)- Info graphic updated (March 2018) directcontribution of tourism and Hospitality, Segment wise revenue share, Expected Segment wise revenue share are shown below
Data showing foreigners visiting India

| Sr.No | Type of Model  | Worst Case             | Most Likely Case          | Best Case              |
|-------|----------------|------------------------|---------------------------|------------------------|
|       | RESIDENTIAL - PRODUCT MIX | 13,37,05,381.94 | 27,66,37,975.35 | 76,87,43,995.94 |
| 1     | NPV            | 13,37,05,381.94       | 27,66,37,975.35         | 76,87,43,995.94       |
| 2     | IRR            | 19%                    | 22%                      | 27%                    |
| 3     | BCR            | 1.17                   | 1.25                     | 1.37                   |
| 4     | Payback Period (in yrs) | 3.19                | 3.27                     | 3.27                   |
|       | Duration       | 5                      | 5                        | 5                      |
|       | HOSPITALITY- 3 STAR | 1,51,28,82,000.00  | 1,79,62,50,400.00       | 2,15,80,16,000.00     |
| 1     | NPV            | 1,51,28,82,000.00     | 1,79,62,50,400.00       | 2,15,80,16,000.00     |
| 2     | IRR            | 19%                    | 20%                      | 27%                    |
| 3     | BCR            | 2.38                   | 2.53                     | 3.40                   |
| 4     | Payback Period (in yrs) | 10                  | 10                       | 10                     |
|       | Duration       | 5                      | 5                        | 5                      |
Conclusion

Above analysis clearly concludes that Residential Apartment or Hotel development with advanced facilities will be physically possible, financially feasible and maximally productive. Focusing on NPV, IRR, BCR and Payback period we can conclude that Residential Apartment with product mix design is the most feasible option on this hypothetical site taking into consideration the hospitality’s payback period to be the changing side of coin.

ANNEXURE

POPULATION GROWTH

![Population Growth Graph]

Figure 16 Population Growth

POPULATION GROWTH POTENTIAL

![Population Growth Potential Graph]

Figure 17 Population Growth Potential

SEX RATIO

![Sex Ratio Graph]

Figure 18 Sex Ratio

AGE MAKEUP: 0-6 AGE GROUP

![Age Makeup Graph]

Figure 19 Age Make up (0-6 age)
LITERACY RATE

| Persons | Male   | Female | Literates % |
|---------|--------|--------|-------------|
| 89.7    | 92.08  | 87.4   |             |

**Table 4: Literacy Rate**

**Figure 21: Work Participation Ratio**

**Figure 22: Link to surrounding micro-markets (en.m.wikipedia.org)**

**Figure 23: Juhu Location Map (Google Earth)**
## FINANCIAL FEASIBILITY CALCULATIONS

### RESIDENTIAL FEASIBILITY- Most Likely Case (PRODUCT MIX)

| S.NO. | Description of item | Unit | Quantity | Remarks |
|-------|----------------------|------|----------|---------|
| **A** | **AREA CALCULATIONS** |     |          |         |
| 1     | Plot Area            | Sq. mt | 42397.14 |         |
| 2     | Pit                  |       | 2.40     |         |
| 3     | Rid/ Open Space (15% of Plot Area) | Sq. mt | 6466.67 |         |
| 4     | Amenities (10% of Plot Area) | Sq. mt | 4293.71 |         |
| 5     | Permisable Built up Area | Sq. mt | 77206.65 |         |
| **B** | **AREA CALCULATIONS FOR 2 BHK** |     |          |         |
| 1     | Built Up Area for 2 BHK Building | Sq. mt | 34779.08 | 45% of Total Area |
| 2     | Built Up Area for 2 BHK Flats | Sq. ft | 274302.90 | Including Built up & Fungible |
| 3     | Salesate/ Carpet Area | Sq. ft | 131025.52 |         |
| 4     | No. of Buildings     | Nos.  | 2.00     |         |
| 5     | No. of Floors        | Nos.  | 12.90    | Considering 36m height |
| 6     | Floor Plate of One Building | Sq. ft | 18717.95 | Includes BUZA Area |
| 7     | Floor Plate of One Building | Sq. ft | 5495.49 | Includes Carpet Area |
| 8     | No. of Flats Floor in One Building | Nos. | 8.00 |         |
| 9     | Proposed Carpet Area for per 2 BHK | Sq. ft | 663.43 |         |
| 10    | Nos. of 2 BHK Flats in One Building | Nos. | 92.90 | Excluding 8 Flats on Stil & 4 Flats on Refuge |
| 11    | Nos. of 2 BHK Flats in Two Building | Nos. | 184.00 |         |
| **C** | **AREA CALCULATIONS FOR 1 BHK** |     |          |         |
| 1     | Built Up Area for 1 BHK Building | Sq. mt | 27959.40 | 35% of Total Area |
| 2     | Built Up Area for 1 BHK Flats | Sq. ft | 29171.19 | Including Built up & Fungible |
| 3     | Salesate/ Carpet Area | Sq. ft | 151990.67 |         |
| 4     | No. of Buildings     | Nos.  | 2.00     |         |
| 5     | No. of Floors        | Nos.  | 12.90    | Considering 36m height |
| 6     | Floor Plate of One Building | Sq. ft | 12132.10 | Includes BUZA Area |
| 7     | Floor Plate of One Building | Sq. ft | 4246.24 |         |
| 8     | No. of Flats Floor in One Building | Nos. | 10.00 |         |
| 9     | Proposed Carpet Area for per 1 BHK | Sq. ft | 424.62 |         |
| 10    | Nos. of 1 BHK Flats in One Building | Nos. | 58.90 | Excluding 8 Flats on Stil & 4 Flats on Refuge |
| 11    | Nos. of 1 BHK Flats in Two Building | Nos. | 116.00 |         |
| **D** | **AREA CALCULATIONS FOR 3 BHK** |     |          |         |
| 1     | Built Up Area for 3 BHK Building | Sq. mt | 15457.37 | 20% of Total Area |
| 2     | Built Up Area for 3 BHK Flats | Sq. ft | 156363.13 | Including Built up & Fungible |
| 3     | Salesate/ Carpet Area | Sq. ft | 59234.10 |         |
| 4     | No. of Buildings     | Nos.  | 1.00     |         |
| 5     | No. of Floors        | Nos.  | 12.90    | Considering 36m height |
| 6     | Floor Plate of One Building | Sq. ft | 35312.63 | Includes BUZA Area |
| 7     | Floor Plate of Building | Sq. ft | 4852.84 |         |
| 8     | No. of Flats Floor in One Building | Nos. | 4.00 |         |
| 9     | Proposed Carpet Area for per 3 BHK | Sq. ft | 1212.21 |         |
| 10    | Nos. of 3 BHK Flats in One Building | Nos. | 38.90 | Excluding 8 Flats on Stil & 4 Flats on Refuge |

### CASH OUT FLOW

#### HARD COST

| S.No. | Description | Amount (Rs.) |
|-------|-------------|--------------|
| 1     | Construction cost per sq ft | 2,500.00 |
| 2     | Construction cost of 10 floors of all buildings | 2,059,81,100.00 |
| 3     | Construction cost of all buildings | 8,77,99,097.76 |
| 4     | Construction cost of all buildings | 5,00,000.00 |
| 5     | Construction cost of all buildings | 2,35,52,50,018.46 |

#### SOFT COST

| S.No. | Amount (Rs.) |
|-------|--------------|
| 6     | 1,17,96,29,099.23 |
| 7     | 1,17,96,29,099.23 |
| 8     | 8,42,21,967.15 |

### LAND COST

| S.No. | Amount (Rs.) |
|-------|--------------|
| 9     | 77,90,00.00 |
| 10    | 93,40,00.00 |
| 11    | 4,01,27,83,847.20 |

### NPV OF TOTAL CASH FLOW OUT

| S.No. | Amount (Rs.) |
|-------|--------------|
| 12    | 5,20,67,099.41 |
| 13    | 2,30,59,999.91 |
| 14    | 5,64,39,999.91 |

### CASH IN FLOW

| S.No. | Amount (Rs.) |
|-------|--------------|
| 15    | 4,15,10,898.81 |
| 16    | 1,31,00,093.20 |
| 17    | 17,73,50,831.94 |
| 18    | 17,98,65,002.32 |
| 19    | 7,27,92,346.51 |

### TOTPAL COST OF CONSTRUCTION

| S.No. | Amount (Rs.) |
|-------|--------------|
| 20    | 5,20,67,099.41 |
| 21    | 2,30,59,999.91 |
| 22    | 5,64,39,999.91 |

### TOTPAL LAND COST

| S.No. | Amount (Rs.) |
|-------|--------------|
| 23    | 4,01,27,83,847.20 |

### TOTPAL SOFT COST

| S.No. | Amount (Rs.) |
|-------|--------------|
| 24    | 5,20,67,099.41 |
| 25    | 2,30,59,999.91 |
| 26    | 5,64,39,999.91 |

### TOTPAL NPV OF TOTAL CASH FLOW OUT

| S.No. | Amount (Rs.) |
|-------|--------------|
| 27    | 5,20,67,099.41 |
| 28    | 2,30,59,999.91 |
| 29    | 5,64,39,999.91 |

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| Year   | Cash Inflow % | Cash Inflow (₹)  | Cash Outflow (₹) | NCF (PBT) (₹) | CUMULATIVE (PBT) (₹) |
|--------|---------------|------------------|------------------|---------------|----------------------|
| 2018   | 0%            | 8,72,99,25,116   | 5,74,07,55,587   | 5,74,07,55,587 | -57,40,55,587        |
| 2019   | 20%           | 1,74,79,85,223.16 | 2,29,47,62,862   | 1,34,61,85,180 | -439,95,64,047       |
| 2020   | 20%           | 2,29,75,49,920.57 | 2,29,75,49,920.57 | 1,93,53,49,920.57 | -245,92,34,920.57   |
| 2021   | 20%           | 2,79,60,74,253.63 | 2,29,75,49,920.57 | 33,80,17,199.02 | -2,23,16,93,327.2   |
| 2022   | 20%           | 2,79,60,74,253.63 | 2,29,75,49,920.57 | 29,92,83,105.73 | 2,49,25,56,73.26    |
| 2023   | 20%           | 3,07,10,65,846.89 | 2,29,75,49,920.57 | 25,51,26,541.98 | 2,81,59,43,504.51   |

**Mortgage Loan Payments**

| Pvt No | Payment Date | Beginning Balance | Scheduled Payment | Extra Payment | Total Payment | Principal | Interest | Ending Balance | Cumulative Interest |
|--------|--------------|-------------------|-------------------|---------------|---------------|-----------|-----------|-----------------|---------------------|
| 1      | 01-12-2010   | 1,49,72,33,612.1 | 40,99,00,929.00   | -             | 40,99,00,929.00 | 21,26,88,089.43 | 15,76,11,231.27 | 1,54,33,350.62     | 1,54,33,350.62      |
| 2      | 01-12-2020   | 1,89,43,33,687.24| 40,99,00,929.00   | -             | 40,99,00,929.00 | 24,29,94,220.21 | 16,72,05,872.59 | 93,16,33,126.59   | 36,42,17,904.94    |
| 3      | 01-12-2021   | 50,16,39,125.57  | 40,99,00,929.00   | -             | 40,99,00,929.00 | 27,05,71,452.58 | 13,32,25,477.22 | 67,54,87,574.89   | 49,74,87,382.66    |
| 4      | 01-12-2022   | 50,16,39,125.57  | 40,99,00,929.00   | -             | 40,99,00,929.00 | 31,54,05,452.58 | 9,44,92,474.43  | 35,05,62,218.12   | 59,19,42,657.11    |
| 5      | 01-12-2023   | 50,16,39,125.57  | 40,99,00,929.00   | -             | 40,99,00,929.00 | 31,54,05,452.58 | 9,44,92,474.43  | 35,05,62,218.12   | 59,19,42,657.11    |

**Annuity Formula**: 

\[ A = \frac{P \times r}{1 - (1 + r)^{-n}} \]
# Financial Feasibility Calculations

## Residential Feasibility - Worst Case (Product Mix)

| S. No. | Description of Item | Unit | Quantity | Remarks |
|--------|---------------------|------|----------|---------|
| **A**  | **Area Calculations** |      |          |         |
| 1      | Plot Area           | Sq. mt | 42937.14 |         |
| 2      | FSI                 |       | 2.40     |         |
| 3      | GSI/ Open Space (15% of Plot Area) | Sq. mt | 6440.57 |         |
| 4      | Amenities (10% of Plot Area) | Sq. mt | 4293.71 |         |
| 5      | Permissable Built up Area | Sq. mt | 77286.35 |         |
| **B**  | **Area Calculations for 2 BHK** |      |          |         |
| 1      | Built up Area for 2 BHK Building | Sq. mt | 34779.08 | 45% of Total Area |
| 2      | Built Up Area for 2 BHK Flats | Sq. ft | 374362.05 | Including Built up & Fungible |
| 3      | Saleable/ Carpet Area | Sq. ft | 15028.72 |         |
| 4      | No. of Buildings    | Nos.  | 2.00     |         |
| 5      | No. of Floors       | Nos.  | 12.00    | Considering 36m height |
| 6      | Floor Plate of One Building | Sq. ft | 15598.42 | Includes BUA Area |
| 7      | Floor Plate of One Building | Sq. ft | 6459.46 | Includes Carpet Area |
| 8      | No. of Flats' Floor in One Building | Nos. | 8.00 |         |
| 9      | Proposed Carpet Area for per 2 BHK | Sq. ft | 682.43 |         |
| 10     | Nos. of 2 BHK Flats in One Building | Nos. | 92.00 | Excluding 8 Flats on Stilt & 4 Flats on Refuge |
| 11     | Nos. of 2 BHK Flats in Two Building | Nos. | 184.00 |         |
| **C**  | **Area Calculations for 1 BHK** |      |          |         |
| 1      | Built up Area for 1 BHK Building | Sq. mt | 27569.40 | 35% of Total Area |
| 2      | Built up Area for 1 BHK Flats | Sq. ft | 291710.49 | Including Built up & Fungible |
| 3      | Saleable/ Carpet Area | Sq. ft | 101989.67 |         |
| 4      | No. of Buildings    | Nos.  | 2.00     |         |
| 5      | No. of Floors       | Nos.  | 12.00    | Considering 36m height |
| 6      | Floor Plate of One Building | Sq. ft | 12130.10 | Includes BUA Area |
| 7      | Floor Plate of One Building | Sq. ft | 4334.24 |         |
| 8      | No. of Flats' Floor in One Building | Nos. | 10.30 |         |
| 9      | Proposed Carpet Area for per 1 BHK | Sq. ft | 424.62 |         |
| 10     | Nos. of 1 BHK Flats in One Building | Nos. | 58.00 | Excluding 8 Flats on Stilt & 4 Flats on Refuge |
| 11     | Nos. of 1 BHK Flats in Two Building | Nos. | 116.00 |         |
| **D**  | **Area Calculations for 3 BHK** |      |          |         |
| 1      | Built up Area for 3 BHK Building | Sq. mt | 15457.37 | 20% of Total Area |
| 2      | Built up Area for 3 BHK Flats | Sq. ft | 166383.73 | Including Built up & Fungible |
| 3      | Saleable/ Carpet Area | Sq. ft | 58334.10 |         |
| 4      | No. of Buildings    | Nos.  | 1.00     |         |
| 5      | No. of Floors       | Nos.  | 12.00    | Considering 36m height |
| 6      | Floor Plate of One Building | Sq. ft | 6519.16 | Includes BUA Area |
| 7      | Floor Plate of Building | Sq. ft | 4582.64 |         |
| 8      | No. of Flats' Floor in One Building | Nos. | 4.00 |         |
| 9      | Proposed Carpet Area for per 3 BHK | Sq. ft | 1326.68 |         |
| 10     | Nos. of 3 BHK Flats in One Building | Nos. | 36.00 | Excluding 8 Flats on Stilt & 4 Flats on Refuge |
| **E**  | **Cash Out Flow** |      |          |         |
| 1      | Hard Cost | Rs. | 2,500.00 | Interest Rate increase than 24m (2200 + 360) |
| 2      | Construction cost of 10 Floors of all Buildings | Rs. | 1,91,34,06,052.33 |         |
| 3      | Construction cost of Refuge Floor of all Buildings | Rs. | 11,90,07,876.27 | 75% cost of one floor |
| 4      | Construction cost of Stilt Floor of all Buildings | Rs. | 7,97,25,262.18 | 50% cost of one floor |
| 5      | Construction cost of Terrace Floor of all Buildings | Rs. | 7,97,25,262.18 | 50% cost of one floor |
| 6      | Construction cost of all Building | Rs. | 2,19,24,44,434.97 |         |
| 9      | Equity - 26% | Rs. | 43,84,89,986.99 |         |
| 10     | Debt - 80% | Rs. | 1,75,39,55,547.97 | (Loan Amt.) |
| 11     | Interest Amt for 5 Year | Rs. | 1,02,76,50,508.14 | (Interest Amt.) |
| **F**  | **Land Cost** |      |          |         |
| 1       | Ready Recknar cost of Land | Rs. (Sq.mt) | 77,900.00 |         |
| 10      | Actual Land Cost | Rs. (Sq.mt) | 93,480.00 | 20% on Ready Recknar Land Cost |
| 11      | Total Land Cost | Rs. | 4,01,37,63,847.20 |         |
| **G**  | **Soft Cost** |      |          |         |
| 12      | TDR & Additional Premium FSI | Rs. | 1,34,46,10,888.81 |         |
| 13      | Miscellaneous Amount | Rs. | 31,03,10,414.11 |         |
| 14      | 6% Stamp duty | Rs. | 37,23,72,496.53 |         |
| 15      | 2% Brokerage | Rs. | 13,35,50,455.68 |         |
| 16      | Approval of Project | Rs. (Sq.mt) | 7,27,60,621.66 | Rs.250/- on Total Saleable Area |
| 17      | Total Cost Construction | Rs. | 5,46,74,95,967.38 |         |
### CASH IN FLOW

|   | NPV of Total Cash Outflow | Rs.          |
|---|----------------------------|--------------|
|   |                            | Rs 5,85,69,62,693.56 |

**CASH IN FLOW**

1. Total No. of Flats in 1 BHK Building: 116
2. Saleable Area For 1 BHK: 424.62 sq.ft
3. Total No. of Flats in 2 BHK Building: 184
4. Saleable Area For 2 BHK: 667.45 sq.ft
5. Total No. of Flats in 3 BHK Building: 36
6. Saleable Area For 3 BHK: 1,326.6 sq.ft
7. Saleable Area Rate: Rs 30,000.00
8. Total Revenue from project: Rs 6,67,75,22,783.12
9. NPV of Total Cash Inflow: Rs 6,87,03,68,773.97

### FINANCIAL CALCULATIONS

|   | Duration | Yrs.  | 5 |
|---|----------|-------|---|
|   | Tax      | Rs.   | 3,05,35,19,327 |
|   | 3%       | Rs.   | 13,22,76,57,751.61 |
|   | NPV of profit | Rs.  | -13,37,05,381.94 |
|   | IRR      | 19%   |   |
|   | BCR | 1.17 |

### Mortgage Loan Payments

#### Loan Details
- Loan Amount: Rs 2,25,15,60,920.23
- Annual Interest Rate: 14.50%
- Loan Period in Years: 5
- Number of Payments Per Year: 1
- Start Date of Loan: 9.12.2019
- Option for Extra Payments: Rs -

#### Loan Summary
- Scheduled Payment: Rs 65,04,41,487.47
- Actual Number of Payments: 5
- Total Amount Paid: Rs 31,52,17,600.00
- Total Interest: Rs 1,02,76,50,508.13

| No. | Payment Date | Beginning Balance | Scheduled Payment | Total Payment | Principal Interest Ending Balance Cumulative Interest |
|-----|--------------|-------------------|-------------------|--------------|-------------|----------------|----------------|
| 1   | 01-12-2019   | 3,25,15,60,920.23 | 65,04,41,487.47  | 68,29,96,407.70 | 31,52,17,600.00 | 1,02,76,50,508.13 |
| 2   | 01-12-2020   | 3,25,15,60,920.23 | 65,04,41,487.47  | 68,29,96,407.70 | 31,52,17,600.00 | 1,02,76,50,508.13 |
| 3   | 01-12-2021   | 3,25,15,60,920.23 | 65,04,41,487.47  | 68,29,96,407.70 | 31,52,17,600.00 | 1,02,76,50,508.13 |
| 4   | 01-12-2022   | 3,25,15,60,920.23 | 65,04,41,487.47  | 68,29,96,407.70 | 31,52,17,600.00 | 1,02,76,50,508.13 |
| 5   | 01-12-2023   | 3,25,15,60,920.23 | 65,04,41,487.47  | 68,29,96,407.70 | 31,52,17,600.00 | 1,02,76,50,508.13 |
| Year | Cash Inflow% | Cash inflow | Cash Outflow | NCF (PBT) | CUMULATIVE (PBT) |
|------|-------------|-------------|--------------|-----------|-----------------|
| 2019 | 0%          | ₹ 98,38,58,278.48 | ₹ 96,38,58,278.48 | ₹ 1,00,00,00,00 | ₹ 1,00,00,00,00 |
| 2020 | 20%         | ₹ 98,38,58,278.48 | ₹ 96,38,58,278.48 | ₹ 1,00,00,00,00 | ₹ 1,00,00,00,00 |
| 2021 | 0%          | ₹ 98,38,58,278.48 | ₹ 96,38,58,278.48 | ₹ 1,00,00,00,00 | ₹ 1,00,00,00,00 |
| 2022 | 0%          | ₹ 98,38,58,278.48 | ₹ 96,38,58,278.48 | ₹ 1,00,00,00,00 | ₹ 1,00,00,00,00 |
| 2023 | 0%          | ₹ 98,38,58,278.48 | ₹ 96,38,58,278.48 | ₹ 1,00,00,00,00 | ₹ 1,00,00,00,00 |
| 2024 | 70%         | ₹ 6,56,50,420.00  | ₹ 7,18,50,683.33  | ₹ 7,18,50,683.33  | ₹ 7,18,50,683.33  |
| 2025 | 60%         | ₹ 1,10,00,00,00  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  |
| 2026 | 60%         | ₹ 1,10,00,00,00  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  |
| 2027 | 60%         | ₹ 1,10,00,00,00  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  |
| 2028 | 60%         | ₹ 1,10,00,00,00  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  |
| 2029 | 60%         | ₹ 1,10,00,00,00  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  | ₹ 6,45,93,271.04  |

**Note:**
- **NPV of Total Cash Inflow:** ₹ 17,23,38,08,823.77
- **Construction Period:** 5 Yrs.
- **Tax:** 33% of Net profit every year
- **NPV of profit:** 73.62% of 60,420.00
- **IRR:** 20%
- **BCR (Benefit Cost Ratio):** 2.534276459
- **Payback Period:** 15.00 Yrs.
### FINANCIAL FEASIBILITY CALCULATIONS

#### HOSPITALITY FEASIBILITY - WORST Case

| S.NO. | Description of item | Unit | Quantity | Remarks |
|-------|---------------------|------|----------|---------|
| A     | **AREA CALCULATIONS** |      |          |         |
| 1     | Plot Area           | Sq. mt. | 42937.14 |         |
| 2     | FSI                 |       | 2.40     |         |
| 3     | ROG Open Space (15% of Plot Area) | Sq. mt. | 6440.57 |         |
| 4     | Amenities (10% of Plot Area) | Sq. mt. | 4293.71 |         |
| 5     | Permissible Built up Area | Sq. mt. | 77268.65 |         |
| A     | **AREA CALCULATIONS FOR HOSPITALITY** |      |          |         |
| 1     | Built up Area for Hotel | Sq. mt. | 21640.32 | 28% of Total Project (60% seating & 30% kitchen) |
| 2     | Built up Area for Rooms | Sq. mt. | 19321.71 | 25% of Total Project |
| 3     | Built up Area for Banquet | Sq. mt. | 5410.08 | 7% of Total Project |
| 4     | Built up Area for Conference | Sq. mt. | 3864.34 | 5% of Total Project |
| 5     | Built up Area for Dormitory | Sq. mt. | 7726.39 | 10% of Total Project |
| 6     | Built up Area for Admin | Sq. mt. | 7726.39 | 10% of Total Project |
| 7     | Built up Area for Cafe | Sq. mt. | 11592.03 | 15% of Total Project |
| B     | **CASH OUT FLOW** |      |          |         |
| 1     | HARD COST |      |          |         |
| 1     | Construction cost per sq ft | Rs. | 7,500.00 | According to CBRE Report 7500/- |
| 2     | Construction cost of Hotel | Rs. | 16,23,02,389.20 |         |
| 3     | Construction cost of Rooms | Rs. | 14,49,12,847.50 |         |
| 4     | Construction cost of Banquet | Rs. | 4,05,75,997.30 |         |
| 5     | Construction cost of Conference | Rs. | 2,89,82,569.50 |         |
| 6     | Construction cost of Dormitory | Rs. | 5,79,85,139.00 |         |
| 7     | Construction cost of Admin | Rs. | 5,79,85,139.00 |         |
| 8     | Construction cost of Cafe | Rs. | 8,89,47,708.50 |         |
| 9     | Construction cost of all Building | Rs. | 57,96,51,390.00 |         |
| 8     | Equity - 80% | Rs. | 46,37,21,112.00 |         |
| 9     | Loan Amt. | Rs. | 11,89,36,278.00 | (Loan Amt.) |
| 10    | Interest Amt for 30 Year | Rs. | 34,96,13,261.18 | (Interest Amt.) |
| 9     | Ready Reckoner cost of Land | Rs/Sq.mtx | 77,900.00 |         |
| 10    | Actual Land Cost | Rs/Sq.mtx | 93,480.00 | 20% on Ready Reckoner Land Cost |
| 11    | Total Land Cost | Rs. | - |         |
| 12    | SOFT COST |      |          |         |
| 12    | TDR & Additional Premium FSI | Rs. | 2,80,96,34,663.04 |         |
| 13    | 5% Miscellaneous Amount | Rs. | 2,89,82,569.50 |         |
| 14    | 6% Stamp duty | Rs. | 3,47,79,083.40 |         |
| 15    | 3% Brokerage | Rs. | - |         |
| 16    | Approvals of Project | Rs/Sq.mtx | 1,25,56,113.45 | Rs 250/- on Total Saleable Area |
| 17    | Total Cost Construction | Rs. | 4,39,48,71,500.57 |         |

#### EXPENSES

| S.NO. | Description | NOS. | % |
|-------|-------------|------|---|
| 1     | Room Maintenance | Nos. | 5% |
| 2     | Administrative & General | Nos. | 3% |
| 3     | Marketing | Nos. | 1% |
| 4     | Property operations & Maintenance | Nos. | 5% |
| 5     | License Fees | Nos. | 2% |
| 6     | Energy | Nos. | 8% |
| 7     | Management Fee | Nos. | 7% |

#### FIXED EXPENSES

| S.NO. | Description | NOS. | % |
|-------|-------------|------|---|
| 1     | Property Tax | Nos. | 2% |
| 2     | Insurance | Nos. | 1% |
| 3     | Incentive Fees | Nos. | 1% |
| 4     | Reserve for Replacement | Nos. | 2% |
| 5     | Tax | Nos. | 12% |

#### 6. NPV of Total Cash Out Flow

| Description | Rs. |
|-------------|-----|
| Total Cost Construction | 4,39,48,71,500.57 |
| **NPV** | **6,07,40,97,689.69** |

#### C. CASH IN FLOW

| Description | Rs. |
|-------------|-----|
| Revenue generated by Hotel | 2,200.00 |
| Capacity of 2000 ppi |
| Revenue generated by Rooms | 8,000.00 |
| Considering 350 rooms |
| Revenue generated by Banquet | 3,000.00 |
| Considering 2 Banquet |
| Revenue generated by Conference & Seminar Halls | 1,500.00 |
| 1800/- per hour (4hrs for 40 days in yr) |
| Revenue generated by Dormitory | - |
| Revenue generated by Admin | - |
| Revenue generated by Cafe | 800.00 |
| Capacity of 600 ppi (Rs.1000/person for 280 days) |
| D | FINANCIAL CALCULATIONS |
|---|------------------------|
| 1 | Duration               |
| 2 | Tax                    |
| 3 | PAT                    |
| 4 | NPV of profit          |
| 5 | WRR                    |
| 6 | BCR (Benefit Cost Ratio)|
| 7 | Payback Period         |

| Year | Cash Inflow % | Cash Inflow | Cash Outflow | NCF (PBT) | CUMULATIVE (PBT) |
|------|---------------|-------------|--------------|-----------|------------------|
| 2018 | Initial Stage | 0%          | 0            | 0         | 0                |
| 2019 | 0%            | 20%         | 87.89,74,300.11 | -87.89,74,300.11 | -87974300.1 |
| 2020 | 0%            | 20%         | 87.89,74,300.11 | -87.89,74,300.11 | -1757948600 |
| 2021 | 0%            | 20%         | 87.89,74,300.11 | -87.89,74,300.11 | -2636922900 |
| 2022 | 0%            | 20%         | 87.89,74,300.11 | -87.89,74,300.11 | -3515897200 |
| 2023 | 0%            | 20%         | 87.89,74,300.11 | -87.89,74,300.11 | -4394871501 |
| 2024 | 70%           | 20%         | 96.71,80,730.13 | 54.57,01,269.87 | -3849170231 |
| 2025 | Excavation 10%  | 80%         | 1,81.54,58,400.00 | 75.15,59,598.86 | -3092610834 |
| 2026 | Excavation 10%  | 80%         | 1.96,70,04,240.00 | 82.75,15,656.55 | -2570896077 |
| 2027 | Excavation 10%  | 80%         | 2.19,87,04,664.00 | 90.93,87,112.20 | -1361507886 |
| 2028 | Excavation 10%  | 80%         | 2.41,83,75,130.40 | 1,00.03,25,623.42 | -631821417 |
| 2029 | Excavation 10%  | 80%         | 2.65,80,12,643.44 | 1,10.03,58,405.77 | 794176264.1 |
| 2030 | Excavation 10%  | 80%         | 2.92,83,13,907.78 | 1,21.03,94,246.34 | 1849570510 |
| 2031 | Excavation 10%  | 80%         | 3.21,81,85,298.56 | 1,33.14,33,679.08 | 3281004181 |
| 2032 | Excavation 10%  | 80%         | 3.53,78,14,828.42 | 1,46.45,77,036.07 | 4745581219 |
| 2033 | Excavation 10%  | 80%         | 3.86,15,86,311.28 | 1,61.03,94,741.88 | 6356515661 |
| 2034 | Excavation 10%  | 80%         | 4.28,07,55,642.36 | 1,77.21,38,216.87 | 8128754197 |
| 2035 | Excavation 10%  | 80%         | 4.70,88,31,836.83 | 1,94.03,53,027.68 | 10078106215 |
| 2036 | Excavation 10%  | 80%         | 5.17,69,14,690.29 | 1,14,03,14,985.95 | 1222393457 |
| 2037 | Excavation 10%  | 80%         | 5.69,76,18,159.32 | 2,35,87,15,969.59 | 14581109422 |
| 2038 | Excavation 10%  | 80%         | 6.21,74,54,775.25 | 2,50,87,85,562.15 | 17175696698 |
| 2039 | Excavation 10%  | 80%         | 6.86,42,02,252.77 | 2,85,40,48,316.36 | 20029733003 |
| 2040 | Excavation 10%  | 80%         | 7,58,93,20,778.05 | 3,13,40,50,950.20 | 23169194255 |
| 2041 | Excavation 10%  | 80%         | 8.31,92,62,305.86 | 3,45,33,96,045.22 | 29622902986 |
| 2042 | Excavation 10%  | 80%         | 9.17,81,80,536.44 | 3,79,87,55,849.74 | 34213256648 |
| 2043 | Excavation 10%  | 80%         | 10,09,37,85,590.08 | 4,17,89,214.71 | 345999316183 |
| 2044 | Excavation 10%  | 80%         | 11,10,31,78,449.09 | 4,59,60,73,136.18 | 391964052960 |
| 2045 | Excavation 10%  | 80%         | 12,21,34,96,294.00 | 5,05,61,17,498.90 | 44225224495 |
| 2046 | Excavation 10%  | 80%         | 13,43,45,50,923.40 | 5,56,17,28,864.73 | 49814251315 |
| 2047 | Excavation 10%  | 80%         | 14,77,83,30,515.74 | 6,11,79,01,751.26 | 55832153085 |
| 2048 | Excavation 10%  | 80%         | 16,25,81,86,567.32 | 6,72,96,71,926.39 | 62661844991 |
## Mortgage Loan Payments

| Post No. | Payment Date | Beginning Balance | Scheduled Payment | Extra Payment | Total Payment | Principal | Interest | Ending Balance | Cumulative Interest |
|----------|--------------|------------------|------------------|---------------|--------------|-----------|----------|----------------|--------------------|
| 1        | 01-12-1924  | $46,37,21,112.00 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,99,714.71 | $49,20,955.68 | $46,24,1937.39 | $46,24,1937.39     |
| 2        | 01-12-2020  | $46,24,21,167.39 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,89,109.23 | $45,15,158.15 | $45,90,158.15 | $45,90,158.15     |
| 3        | 01-12-2021  | $45,99,65,525.43 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,78,504.53 | $44,77,937.83 | $44,90,941.32 | $44,90,941.32     |
| 4        | 01-12-2022  | $45,75,00,025.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,67,899.63 | $43,90,223.15 | $43,68,623.15 | $43,68,623.15     |
| 5        | 01-12-2023  | $45,50,25,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,57,294.74 | $42,15,608.47 | $41,13,013.08 | $41,13,013.08     |
| 6        | 01-12-2024  | $45,51,23,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,46,709.85 | $40,00,903.62 | $39,00,903.62 | $39,00,903.62     |
| 7        | 01-12-2025  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,36,224.96 | $37,43,888.74 | $37,43,888.74 | $37,43,888.74     |
| 8        | 01-12-2026  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,25,749.97 | $34,81,773.19 | $34,81,773.19 | $34,81,773.19     |
| 9        | 01-12-2027  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,15,274.98 | $31,71,657.94 | $31,71,657.94 | $31,71,657.94     |
| 10       | 01-12-2028  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $12,04,800.99 | $27,09,652.96 | $27,09,652.96 | $27,09,652.96     |
| 11       | 01-12-2029  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,94,326.00 | $23,64,327.96 | $23,64,327.96 | $23,64,327.96     |
| 12       | 01-12-2030  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,83,851.01 | $20,18,852.96 | $20,18,852.96 | $20,18,852.96     |
| 13       | 01-12-2031  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,73,376.02 | $16,72,878.96 | $16,72,878.96 | $16,72,878.96     |
| 14       | 01-12-2032  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,62,901.03 | $13,26,304.96 | $13,26,304.96 | $13,26,304.96     |
| 15       | 01-12-2033  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,52,426.04 | $9,79,330.96  | $9,79,330.96  | $9,79,330.96      |
| 16       | 01-12-2034  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,41,951.05 | $6,31,856.96  | $6,31,856.96  | $6,31,856.96      |
| 17       | 01-12-2035  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,31,476.06 | $2,83,882.96  | $2,83,882.96  | $2,83,882.96      |
| 18       | 01-12-2036  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,21,001.07 | $2,34,808.96  | $2,34,808.96  | $2,34,808.96      |
| 19       | 01-12-2037  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $11,10,526.08 | $1,85,834.96  | $1,85,834.96  | $1,85,834.96      |
| 20       | 01-12-2038  | $45,52,05,028.77 | $6,22,20,670.39  |               | $6,22,20,670.39 | $10,99,601.09 | $1,36,860.96  | $1,36,860.96  | $1,36,860.96      |

Loan Summary:
- Scheduled Payment: $6,22,20,670.39
- Number of Payments: 30
- Total Early Payments: $1,36,860.96
- Total Interest: $1,36,860.96
**FINANCIAL FEASIBILITY CALCULATIONS**

### HOSPITALITY FEASIBILITY - Best Case

| S.NO. | Description of Item | Unit | Quantity | Remarks |
|-------|---------------------|------|----------|---------|
| **A** | **AREA CALCULATIONS** |      |          |         |
| 1     | Plot Area           | Sq. mt | 42937.14 |         |
| 2     | FSI                 |       | 2.40     |         |
| 3     | RG/ Open Space (15% of Plot Area) | Sq. mt | 6440.57 |         |
| 4     | Amenities (10% of Plot Area) | Sq. mt | 4293.71 |         |
| 5     | Permissible Built up Area | Sq. mt | 77286.85 |         |
| **C** | **AREA CALCULATIONS FOR HOSPITALITY** |      |          |         |
| 1     | Built up Area for Hotel | Sq. mt | 21640.32 | 28% of Total Project (60% seating & 30% kitchen) |
| 2     | Built up Area for Rooms | Sq. mt | 19321.71 | 25% of Total Project |
| 3     | Built up Area for Banquet | Sq. mt | 5410.08 | 7% of Total Project |
| 4     | Built up Area for Conference | Sq. mt | 3864.34 | 5% of Total Project |
| 5     | Built up Area for Dormitory | Sq. mt | 7728.69 | 10% of Total Project |
| 6     | Built up Area for Admin | Sq. mt | 7728.69 | 10% of Total Project |
| 7     | Built up Area for Café | Sq. mt | 11593.03 | 15% of Total Project |
| **B** | **CASH OUT FLOW** |      |          |         |
| 8     | Equity - 80% | Rs. | 46,37,21,112.00 |         |
| 9     | Debt - 20% | Rs. | 11,59,30,278.00 | (Loan Amt.) |
| 10    | Interest Amt for 3 Year | Rs. | 34,96,13,261.18 | (Interest Amt.) |
| **LAND COST** | | | | |
| 9     | Ready Recknar cost of Land | Rs./Sq.m | 77,000.00 |         |
| 10    | Actual Land Cost | Rs./Sq.m | 93,480.00 | 20% on Ready Recknar Land Cost |
| 11    | Total Land Cost | Rs. | - |         |
| **SOFT COST** | | | | |
| 12    | TDR & Additional Premium FSI | Rs. | 2,80,96,34,693.04 |         |
| 13    | 5% Miscellaneous Amount | Rs. | 2,89,82,569.50 |         |
| 14    | 5% Stamp duty | Rs. | 3,47,79,033.46 |         |
| 15    | 2% Brokerage | Rs. | - |         |
| 16    | Approvals of Project | Rs./Sq.m | 1,25,59,113.45 | Rs.250/- on Total Saleable Area |
| 17    | Total Cost Construction | Rs. | 4,39,48,71,500.57 |         |
| **EXPENSES** | | | | |
| 1     | Room Maintenance | Nos. | 5% |         |
| 2     | Administrative & General | Nos. | 3% |         |
| 3     | Marketing | Nos. | 1% |         |
| 4     | Property operations & Maintenance | Nos. | 5% |         |
| 5     | License Fees | Nos. | 2% |         |
| 6     | Energy | Nos. | 8% |         |
| 7     | Management Fee | Nos. | 7% |         |
| **FIXED EXPENSES** | | | | |
| 1     | Property Tax | Nos. | 2% |         |
| 2     | Insurance | Nos. | 1% |         |
| 3     | Incentive Fees | Nos. | 1% |         |
| 4     | Reserve for Replacement | Nos. | 2% |         |
| 5     | Tax | Nos. | 12% |         |
| 6     | NPV of Total Cash Out Flow | Rs. | 6,07,47,65,272.18 |         |
| **C** | **CASH IN FLOW** | | | |
| 1     | Revenue generated by Hotel | Rs. | 3,000.00 | Capacity of 2000 ppl |
| 2     | Revenue generated by Rooms | Rs. | 12,000.00 | Considering 350 rooms |
| 3     | Revenue generated by Banquet | Rs. | 7,000,000.00 |         |
| 4     | Revenue generated by Conference & Seminar Halls | Rs. | 2,000.00 | 1800/- per hour (4hrs for 40 days in yr) |
| 5     | Revenue generated by Dormitory | Rs. | - |         |
| 6     | Revenue generated by Admin | Rs. | - |         |
| 7     | Revenue generated by Café | Rs. | 1,200.00 | Capacity of 600 ppl (Rs.1000/person for 280 days) |
| Year | Cash Inflow % | Cash inflow | Cash Outflow | NCF (PBT) | CUMULATIVE (PBT) |
|------|---------------|-------------|--------------|-----------|------------------|
|      |               | Total       |              |           |                  |
| 2018 | Initial Stage | 0%          | 0%           | 0%        | 4,39,48,71,501   |
| 2019 | 0%            | 20%         | 87,89,74,300 | 11        | -87,89,74,300    |
| 2020 | 0%            | 20%         | 87,89,74,300 | 11        | -175,76,68,800   |
| 2021 | 0%            | 20%         | 87,89,74,300 | 11        | -263,96,22,900   |
| 2022 | 0%            | 20%         | 87,89,74,300 | 11        | -351,88,97,200   |
| 2023 | 0%            | 20%         | 87,89,74,300 | 11        | -439,84,71,500   |
| 2024 | 0%            | 70%         | 1,19,62,47,867 | 14        | -320,42,23,681   |
| 2025 | Excavation 10%| 80%         | 1,06,41,04,943 | 14        | -167,87,09,374   |
| 2026 | Excavation 10%| 80%         | 1,17,05,15,437 | 14        | -643,89,28,287   |
| 2027 | Excavation 10%| 80%         | 1,26,75,48,200 | 14        | 184,52,28,586    |
| 2028 | Excavation 10%| 80%         | 1,41,63,23,679 | 14        | 387,56,88,035    |
| 2029 | Excavation 10%| 80%         | 1,55,79,56,047 | 14        | 810,91,83,459    |
| 2030 | Excavation 10%| 80%         | 1,71,37,51,651 | 14        | 856,60,49,425    |
| 2031 | Excavation 10%| 80%         | 1,88,51,28,171 | 14        | 1,126,89,90,987  |
| 2032 | Excavation 10%| 80%         | 2,07,38,39,488 | 14        | 1,434,33,81,975  |
| 2033 | Excavation 10%| 80%         | 2,26,10,03,448 | 14        | 1,751,14,19,998  |
| 2034 | Excavation 10%| 80%         | 2,50,91,03,793 | 14        | 2,105,84,44,181  |
| 2035 | Excavation 10%| 80%         | 2,76,00,14,173 | 14        | 2,505,63,35,917  |
| 2036 | Excavation 10%| 80%         | 3,03,60,15,580 | 14        | 2,944,78,61,617  |
| 2037 | Excavation 10%| 80%         | 3,33,96,17,433 | 14        | 3,420,05,23,362  |
| 2038 | Excavation 10%| 80%         | 3,67,35,78,864 | 14        | 3,947,20,12,315  |
| 2039 | Excavation 10%| 80%         | 4,04,09,36,750 | 14        | 4,565,65,05,017  |
| 2040 | Excavation 10%| 80%         | 4,44,50,30,425 | 14        | 5,183,76,01,807  |
| 2041 | Excavation 10%| 80%         | 4,88,95,33,468 | 14        | 5,864,72,98,607  |
| 2042 | Excavation 10%| 80%         | 5,37,84,86,815 | 14        | 6,665,79,65,086  |
| 2043 | Excavation 10%| 80%         | 5,91,83,63,496 | 14        | 7,469,96,96,216  |
| 2044 | Excavation 10%| 80%         | 6,50,79,69,465 | 14        | 8,146,96,40,455  |
| 2045 | Excavation 10%| 80%         | 7,15,87,65,951 | 14        | 8,943,52,01,747  |
| 2046 | Excavation 10%| 80%         | 7,87,86,24,546 | 14        | 9,751,93,86,794  |
| 2047 | Excavation 10%| 80%         | 8,66,21,06,800 | 14        | 1,057,22,21,111  |
| 2048 | Excavation 10%| 80%         | 9,52,83,17,480 | 14        | 1,138,51,18,021  |
### Mortgage Loan Payments

**Table: Mortgage Loan Payments**

| Post No. | Payment Date | Net Payment Date | Beginning Balance | Scheduled Payment | Principal | Interest | Total Payment | Ending Balance |
|----------|--------------|------------------|-------------------|-------------------|----------|----------|--------------|---------------|
| 1        | 01-12-2019   |                  | 11,56,30,276.64   | 1,85,55,167.60    |          |          | 3,24,928.66  | 1,62,30,238.92 |
| 2        | 01-12-2020   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 3        | 01-12-2021   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 4        | 01-12-2022   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 5        | 01-12-2023   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 6        | 01-12-2024   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 7        | 01-12-2025   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 8        | 01-12-2026   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 9        | 01-12-2027   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 10       | 01-12-2028   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 11       | 01-12-2029   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 12       | 01-12-2030   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 13       | 01-12-2031   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 14       | 01-12-2032   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 15       | 01-12-2033   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 16       | 01-12-2034   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 17       | 01-12-2035   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 18       | 01-12-2036   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 19       | 01-12-2037   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 20       | 01-12-2038   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 21       | 01-12-2039   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 22       | 01-12-2040   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 23       | 01-12-2041   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 24       | 01-12-2042   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 25       | 01-12-2043   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 26       | 01-12-2044   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 27       | 01-12-2045   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 28       | 01-12-2046   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 29       | 01-12-2047   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
| 30       | 01-12-2048   |                  | 1,65,55,167.60    | 6,65,167.60       |          |          | 7,30,418.59  | 1,58,26,549.12 |
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