

Topic  
**RESIDENTIAL BUILDING WITH  
FIBER REINFORCED PLASTIC BASED ELEVATION**

A DESSERTATION

Submitted in Fulfillment

Of the Requirement for degree  
Of

MASTER OF ARCHITECTURE

BY:

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# **SYNOPSIS**

## **TITLE**

RESIDENTIAL BUILDING WITH FIBER REINFORCED PLASTIC (FRP)  
BASED ELEVATION

## **INTRODUCTION :-**

RESIDENTIAL BUILDING ARE NOW BEING MADE IN MULTIPLE FLOORS . THIS IS BEING DONE DUE TO LACK OF LAND AREAS IN URBAN AREAS AND AN ADVERSE REQUIREMENT OF POPULATION HOMES WHICH NEED TO BE MET. THUS IN ORDER TO MEET THIS REQUIREMENT OF HOUSING FOR MASSES MULTI LEVEL HOUSING PROJECTS HAVE BECOME THE FIRST CHOICE OF DEVELOPERS NOW DAYS.

MULTI LEVEL RESIDENTIAL PROJECTS START FOR TWO FLORS AND GOES UPTO SIXTY FLOORS AS PER INDIAN MARKETS UPTO NOW.

IF WE TALK ABOUT LOUCKNOW THE MAXIMUM NUMBER OF FLOORS WHIACH HAVE BEEN MADE UPTO TO TODAY IS AROUND TWENTY FIVE FLOORS MAX ON SAHEED PATH LUCKNOW BY A GROUP NAMING SHALIMAR.

IN MULTI LEVEL PARKING POPULATION DENSITY BECOMES VERY MUCH THUS SIMILAR PRECAUTIONS ARE NEEDED TO BE TAKEN FOR NEARBY AREAS FOR CONTROLLING SUCH HIGH DENSITY POPULATION IN THESE AREAS.

IF WE TEND TO XOUNT THE POPULATION OCCUPANCY OF SUCH PROJECTS THE METHOD SHALL BE UNITS PER FLOOR

MULTIPLIED BY THE NUMBER OF TOTAL FLOORS AND THUS THE ANSWER COMES TO NUMBER OF UNITS IN THAT PROJECT. WHICH IS THEN MULTIPLIED BY FIVE OR SIX USERS PER UNIT AND WE GET RIGHT ANSWER.

## **MOTIVATION :-**

## **OBJECTIVE :-**

The main goal of the project is to design spaces for living in which individuals can feel connected and where they can live.

To provide the a luxurious feel of living via enhanced designing work for elevations and internal working spaces.

## **RESEARCH WORK/ METHODS/DESCRIPTION :-**

The data will be collected through

Internet

Books

Research papers

Interviews

Questionnaires

## **LIST OF CASE STUDIES :-**

1. ONE OAC , SAHEED PATH ROAD LUCKNOW.
2. PURVANCHAL KINGS COURT, GOMTI NAGAR, LUCKNOW.

## **CONCLUSION OF CASE STUDIES :-**

THE DESIGNING DONE WAS VERY PLEASING BUT LACKED A FEATURE WHICH MAKES IT A STAND OUT BUILDING JUST BY LOOKING AT ITS EXTERIOR.

### **LIMITATIONS :-**

1. THE DESIGNING MATERIAL SELECTED IS FRP (FIBER REINFORCED PLASTIC) i.e. THIS MATERIAL COSTS COMPARATIVELY HIGHER AS COMPARED TO OTHER BUILDING MATERIAL USED FOR ELEVATION WORKS
2. FRP DESIGNING AS COMPARED TO OTHER MATERIAL AVAILABLE IN MARKET IS A LITTLE SLOW MANUFACTURING PROCESS AS COMPARED TO OTHERS. AS IT IS A ORDER TO MANUFACTURE PRODUCT AS COMPARED TO OTHER AVAILABLE MATERIALS IN MARKET.
3. FRP NEEDS SKILLED CONTRACTORS FOR INSTALLATION. THUS WORKMANSHIP IS A SERIOUS CONCERN IN IT.

### **DESIGN ISSUES :-**

THE MAIN DESIGNING ISSUE WAS TO DESIGN CLASSICAL ELEVATION IN A COMPACT CITY LIFE STRUCTURE BUILDINGS AS THEY DO NOT HAVE MUCH SPACE TO PLAY WITH.

### **RADICAL ISSUES :-**

1. A BALANCED DESIGNING AS PER SYMMETRY
2. PROPER CIRCULATION OF ELEVATION DESIGNING
3. PROPER LIGHTING PROVIDED
4. MAINTAINING THE ELEVATION DEMANDS AS PER PLANNING



## **RESEARCH POINTS :-**

1. CLASSICAL BUILDING DESIGNING PRINCIPLES I.E. BALANCE, SYMMETRY, RHYTHM ETC.
2. PROPER WAY OF IMPLEMENTING CLASSICAL BUILDING DESIGNING ELEMENTS ON CITY LIFE COMPACT STRUCTURES.
3. POSITIONING AND LOCATIONS OF TYPES OF LIGHTING AS THE ADD ON TO THE BASIC SCHEME OF DESIGNING.

## **CASE STUDY :-**

1. ONE OAC , SAHEED PATH ROAD LUCKNOW.

## **INTRODUCTION :-**

SHALIMAR ONE OAC IS A RESIDENTIAL TOWER LOCATED AT SAHEED PATH LUCKNOW. SITUATED NEXT TO SHALIMAR ONE WORLD TOWNSHIP.

IT IS A HIGH RISE BUILDING RESIDENTIAL CATERING MORE THAN 120 UNITS IN TWENTY TWO FLOORS AND OFFERING MANY FEATURES SUCH DOUBLE HEIGHTS VAST BALCONIES ETC.

MULTI LEVEL RESIDENTIAL PROJECTS START FOR TWO FLOORS AND GOES UP TO SIXTY FLOORS AS PER INDIAN MARKETS UP TO NOW.

IF WE TALK ABOUT LUCKNOW THE MAXIMUM NUMBER OF FLOORS WHICH HAVE BEEN MADE UP TO TODAY IS AROUND TWENTY FIVE FLOORS MAX ON SAHEED PATH LUCKNOW BY A GROUP NAMED SHALIMAR.

IN MULTI LEVEL PARKING POPULATION DENSITY BECOMES VERY MUCH THUS SIMILAR PRECAUTIONS ARE NEEDED TO BE TAKEN FOR NEARBY AREAS FOR CONTROLLING SUCH HIGH DENSITY POPULATION IN THESE AREAS.

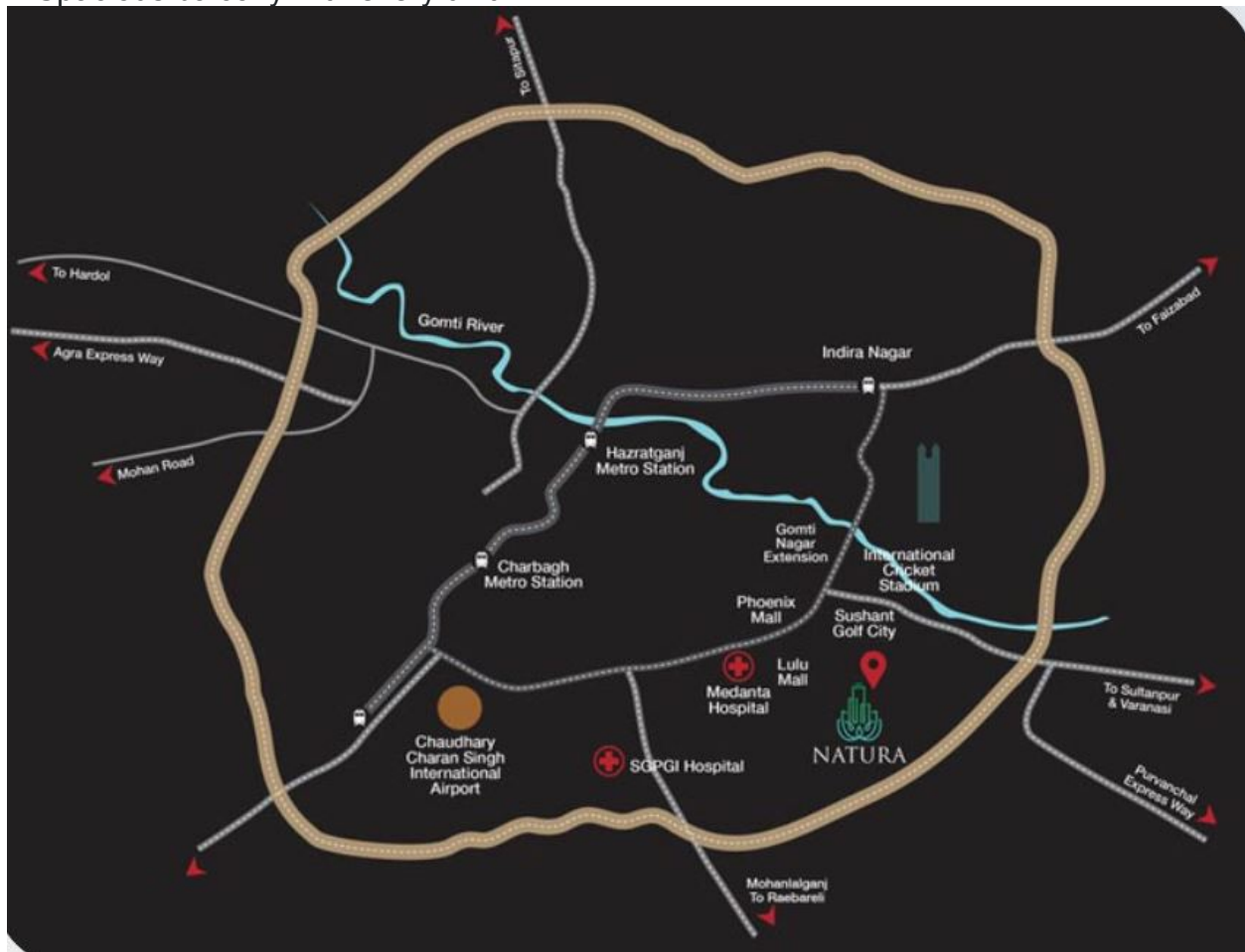


## **LOCATION :-**

Located in the heart of Lucknow with connectivity from Faizabad Road, Sultanpur Road, Raebareli Road, Kanpur Road along with Puravanchal Expressway, where navigation is interrupted to cover the distance.

- 9 Mins - Walmart Best Price
- 6 Mins - Super Speciality Cancer Institute & Hospital
- 10 Mins - GD Goenka School
- 6 Mins - Golf Course, Sushant Golf City
- 12 Mins - ATAL Ekana International Cricket Stadium

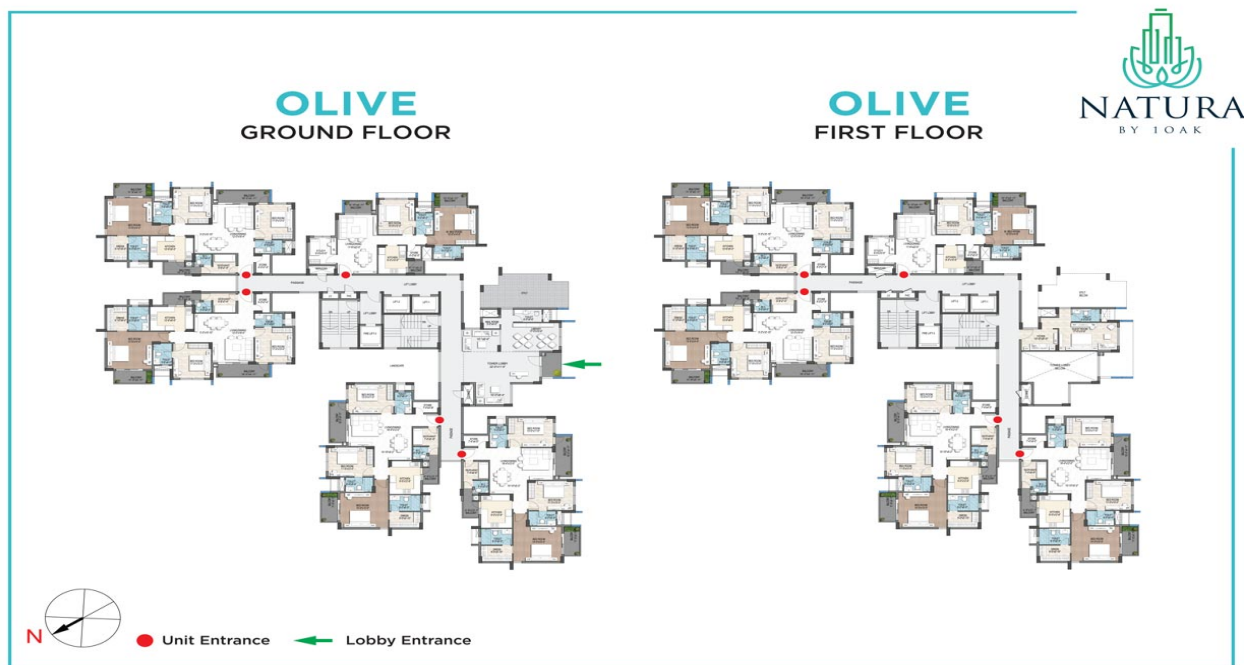
- Exclusive 272 unit collection
- Nature Inspired Luxurious Homes
- Situated in Sushant Golf City
- Spacious balcony with every unit



**SITE PLAN :-**



## FLOOR PLAN :-

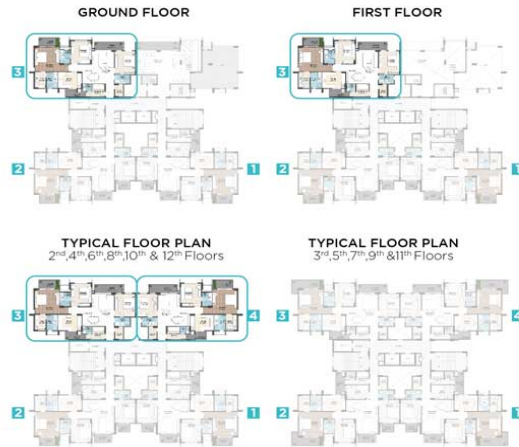






## WILLOW - 3 BHK + STORE [UNIT PLAN]

1  
OAK



### 3 BHK OPTIMA

RERA CARPET	: 1,295.00
BALCONY	: 176.2
USEABLE AREA	: 1,471.20
BUILT-UP AREA	: 1,878.80
SALEABLE AREA	: 2,055.00



● Unit Entrance

## WILLOW - 3.5 BHK + STUDY + STORE [UNIT PLAN]

1  
OAK



### 3.5 BHK ULTIMA

RERA CARPET	: 1,414.00
BALCONY	: 236.12
USEABLE AREA	: 1,650.12
BUILT-UP AREA	: 2,048.88
SALEABLE AREA	: 2,285.00



● Unit Entrance

**UTILITY AND EMINITITES :-**



**SPECIFICATIONS :-**

# SPECIFICATIONS

## STRUCTURE

A structure designed with the highest seismic considerations for the zone as stipulated by the BIS code and for better safety

## FOUNDATION

Reinforced concrete footings & columns.

## ALL BEDROOMS

Flooring / Skirting	Vitrified tiles 800x600 mm
Wall Finishes	Acrylic emulsion on POP punning
Ceiling	Oil bound distemper.

## LIVING / DINING ROOM

Flooring / Skirting	Superior quality vitrified tiles 800x800 mm
Wall Finishes	Acrylic emulsion on POP punning
Ceiling	Oil bound distemper.

## TOILETS

Flooring	Antiskid ceramic tiles
Wall Finishes	Ceramic wall tiles up to dado level (approx. 8400 mm)
Ceiling Finishes	Oil bound distemper with false ceiling
Counter	Granite/Marble
Sanitary Ware	Premium quality range

## STAIRCASE

Flooring	Kota Stone / Indian Stone
Railings	Painted M.S. Railings / S.S. Railings
Wall Finishes	Oil bound distemper on plaster.

## KITCHEN

Flooring / Skirting	Antiskid ceramic tiles
Wall Finishes	Tiles up to 600 mm above the counter and acrylic emulsion paint in the balance area
Ceiling	Oil bound distemper with port false ceiling.

## CP. FITTING AND ACCESSORIES

Grohe/Kohler/Roca or equivalent Toilet fittings / single lever fitting in all toilets. Provision for geyser installation. Rain shower in master toilet.

## LIFT LOBBY

Flooring	Granite / Marble / Tiles
Wall Finishes	Granite / Marble up to 2000 mm on the lift side wall and acrylic emulsion Paint in balance area.
Ceiling	Oil bound distemper.

## COMMON PASSAGE

Flooring	Granite /Indian Marble Wall
Wall Finishes	Acrylic emulsion paint ceiling
Ceiling Finishes	Oil bound distemper.

## DOORS

Main Entrance Door	Painted/Polished hardwood frame with skin moulded door shutters
Internal Doors	Painted/Polished hardwood frame with skin moulded door shutters
Hardware	Locks, Handles and knobs (Mortise and Cylindrical locks) from reputed makes and brands. High quality steel/brass hardware.

## WINDOWS AND EXTERNAL GLAZING

Powder coated aluminum frame or UPVC frame windows with clear glass.

## EXTERNAL WALL FINISH

Exterior grade paint from reputed makes and brands.

## ELECTRICAL WIRING AND INSTALLATIONS

Fixtures & Fittings	ISI mark switches/sockets, distribution boxes and circuit breakers from standard makes and brands
Wiring	ISI mark concealed conduits with copper wire
Plumbing	ISI mark CPVC water supply pipes with standard valves and accessories
Security System	CCTV surveillance, EPABX



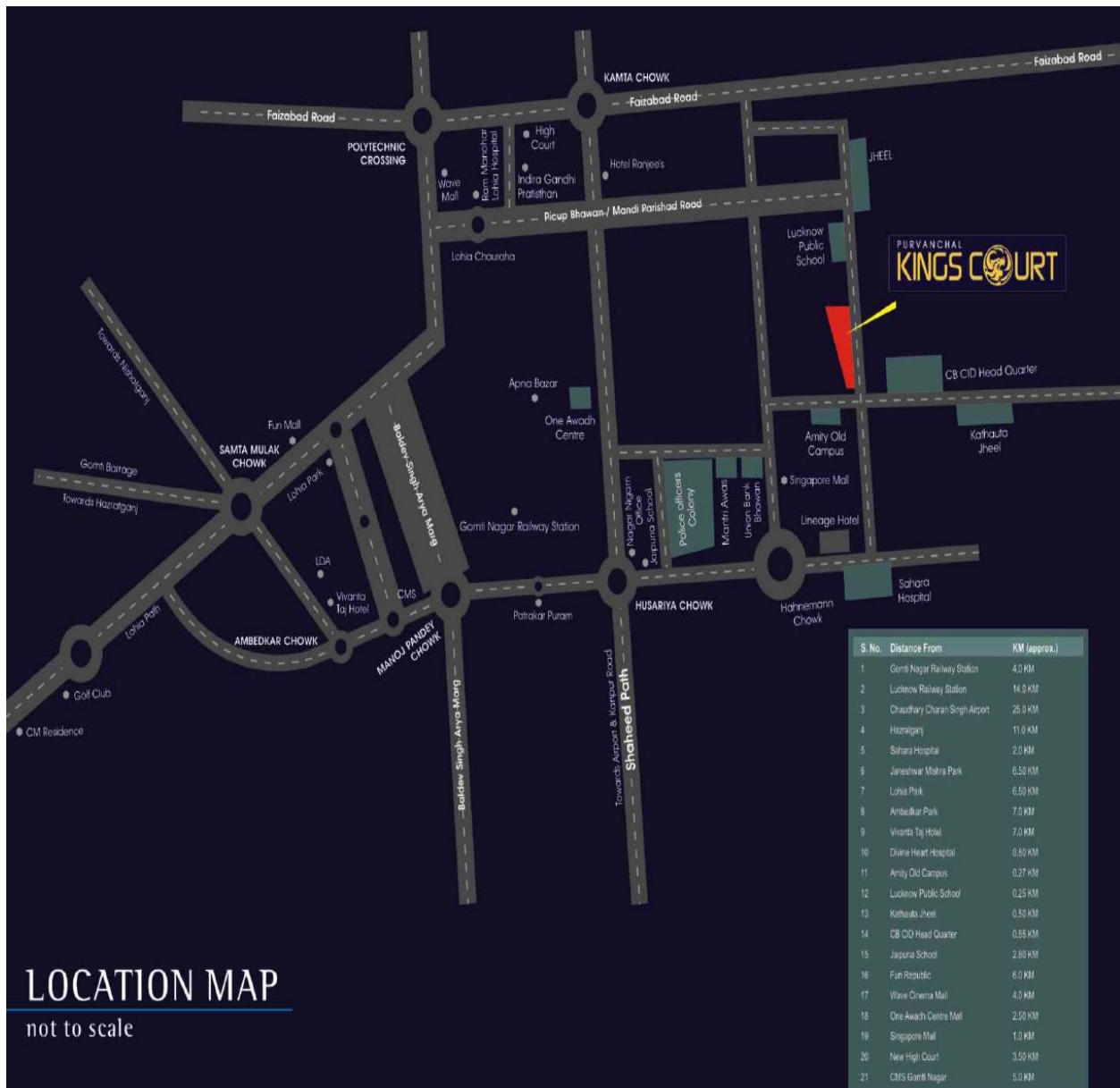


## 2. PURVANCHAL KINGS COURT :-

### INTRODUCTION :-

Arrive at the destination of Kings with a promise of a regal lifestyle at Purvanchal Kings Court. Lavish 3 BHK & 4 BHK Apartments at Vinamra Khand, Gomti Nagar, Lucknow are built with a futuristic vision to 'Revive Awadh's Legacy' with a construction that is both future-ready and elite.

### LOCATION :-



The site plan for Purvanchal Kings Court shows a large residential complex with a central courtyard. The building is divided into several color-coded sections: Type-A-1 (Option-1) in blue, Type-A-1 (Option-2) in brown, Type-A-2 in pink, Type-A-3 (Option-1) in purple, and Type-A-3 (Option-2) in red. The plan includes a badminton court, a swimming pool, a basketball court, and a community hall. The site is bounded by a 24.0 m wide road on the left and a 6.00 m wide road on the right. The total area is 152200 sq. m. The plan also shows a parking area with 153000 sq. m. of space and a 6.00 m wide road on the right. The site is surrounded by a green belt with trees and a 6.00 m wide road on the right. The plan also shows a parking area with 153000 sq. m. of space and a 6.00 m wide road on the right. The site is surrounded by a green belt with trees and a 6.00 m wide road on the right.

**LEGEND :-**

- TYPE-A-1 (OPTION-1)
- TYPE-A-1 (OPTION-2)
- TYPE-A-2
- TYPE-A-3 (OPTION-1)
- TYPE-A-3 (OPTION-2)

**PURVANCHAL KINGS COURT**

**Site Plan Details:**

- Building Layout:** The building is divided into several color-coded sections: Type-A-1 (Option-1) in blue, Type-A-1 (Option-2) in brown, Type-A-2 in pink, Type-A-3 (Option-1) in purple, and Type-A-3 (Option-2) in red.
- Amenities:** The plan includes a badminton court, a swimming pool, a basketball court, and a community hall.
- Boundaries:** The site is bounded by a 24.0 m wide road on the left and a 6.00 m wide road on the right.
- Area:** The total area is 152200 sq. m.
- Parking:** The plan shows a parking area with 153000 sq. m. of space.
- Green Belt:** The site is surrounded by a green belt with trees.



**A2**  
4 BHK with 4 Toilets &  
Servant Room with Toilet

Carpet Area (Sqm) – 156.10  
Carpet Area – 1680 Approx Sq.Ft.  
Area of Exclusive Balconies – 290 Sq.Ft.  
Area Under External Wall – 112 Sq.Ft.  
Common Area – 563 Sq. Ft.  
Total Super Built-up Area – 2645 Sq.Ft.  
1 SQM=10.764 Sq.Ft.



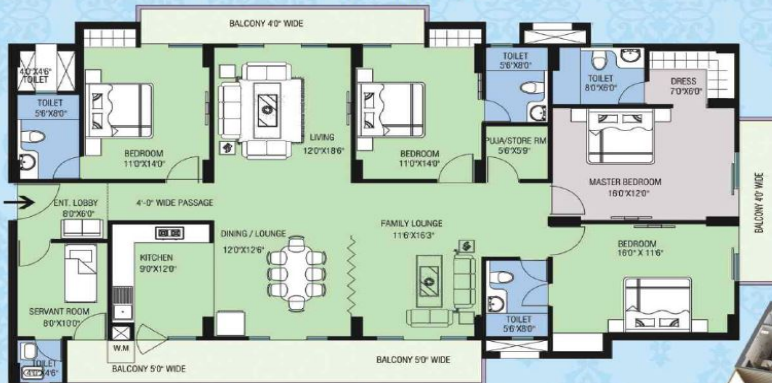
The designs, specifications, unit plans, layout plan, number of floors etc. are indicative and are subject to change. Accessories shown in some of the pictures such as furniture, cabinets, electrical appliances, light fittings, paintings, wall & floor texture etc. are indicative / decorative and are not the part of the sale offered. The area & shape of the balconies at certain floors may change due to provision of architectural designs in elevation in the balconies. The cost of flat will also change accordingly.

Floor Plan

**A1 (Option-2)**  
4 BHK with 4 Toilets, Family Lounge  
& Servant Room with Toilet

Carpet Area (Sqm) – 179.83  
Carpet Area – 1936 Approx Sq.Ft.  
Area of Exclusive Balconies – 338 Sq.Ft.  
Area Under External Wall – 111 Sq.Ft.  
Common Area – 655 Sq. Ft.  
Total Super Built-up Area – 3040 Sq.Ft.  
1 SQM=10.764 Sq.Ft.

PURVANCHAL  
**KINGS COURT**



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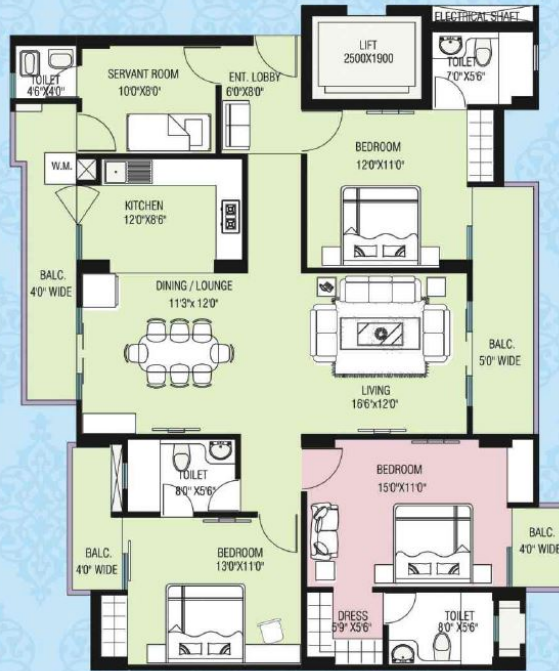
Floor Plan

### A3 (Option-1)

3 BHK with 3 Toilets

& Servant Room with Toilet





Carpet Area (Sqm) – 124.20  
Carpet Area – 1337 Approx Sq.Ft.  
Area of Exclusive Balconies – 244 Sq.Ft.  
Area Under External Wall – 101 Sq.Ft.  
Common Area – 438 Sq. Ft.  
Total Super Built-up Area – 2120 Sq.Ft.  
1 SQM=10.764 Sq.Ft.



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Floor Plan

SPECTFICATIONS :-

SPECIFICATIONS			<div>PURVANCHAL KINGS COURT</div>
	<b>FLOORS</b> Living/Dining & Lobby within Apartment Bedrooms Balcony Kitchen & Toilets	Italian marble /Good quality Indian marble. Wooden colour tiles in master bedroom & vitrified tiles in other bedrooms. Anti-skid tiles. Anti-skid tiles.	
	<b>WALLS</b> Living/Dining/Bedrooms/Passage & Lobby within Apartment	Plastic emulsion.	
	<b>CEILINGS</b>	Plastic emulsion, Decorative POP cornices & POP Moldings.	
	<b>TOILETS</b>	Combination of good quality ceramic tiles in wall & floor. Tiles up-to 7 feet high in toilet walls. CP Fittings of Jaquar/Roca/Grahe/Kohler or equivalent. Off-white/ White chinaware of Hindware / Parryware or equivalent. Provision for installation of geyser.	
	<b>KITCHEN</b>	1. MODULAR KITCHEN - Combination of ceramic tiles in walls & floors: Tiles up-to 2 feet high above kitchen counters. 2. Good quality granite counters, Stainless steel sink. 3. Chimney & hob of good quality.	
	<b>PROVISION FOR AC</b>	Copper pipe and water outlet pipe will be provided in each bedroom & living room so that no dismantling required during fixing of AC.	





