



Neighborhood Plan of Annanya Residential Area

Group: 5

1815009, 1815013

1815021, 1815024, 1815029



Literature Review

- **Holdbeck** Neighborhood Plan, (2017): a pre-industrial village.
- **Linton** Neighbourhood Plan (2015): a lower density of population.
- **Magarpatta** city was designed as a walk to work/school design concept with facilities and **30% green area** (Patel and Padhya, 2021).
- Private Residential Land Development Rules (PRLD), 2015
- Building Construction Act, 1952

Area and Population

According to Private Residential Land Development Rules (**PRLD**), 2015-

Density: 350 people per Acre

Area of Annanya RA: 170.555 Acres

Calculated Population: 60,000





Comparison with PRLD (2015) Standards

No.	Name of Facilities	Quantity	Assigned Area (Katha)	Standard Area (Katha)
1	Nursery School	5	74.7	68.97
2	Primary School	4	79.6	68.97
3	Secondary School	2	74.5	72.6
4	College	1	73	72.6
5	Clinic	2	54.8	54.45
6	Hospital	1	55	54.45
7	Community Centre	16	133.41	72.6
8	Shop and Market	26	151.69	108.9
9	Others	21	142.27	72.6
10	Religious Service	6	71.36	72.6
11	Play Ground	7	105.43	108.9
12	Park and Lake	4	107.27	108.9
13	Net Residential Area	1449	6037	7256.37
14	Residential Road	3177.21 (Includes greenery)		3114.54

Subdivision Pattern



Modified Grid Pattern



Swastika Pattern



Cul-de-sac Pattern

Modified Grid Pattern

- Modified Grid Pattern (**North of highway**)
- Swastika pattern (**Centre**)
- To avoid the sense of monotonous.
- To ensure facilities easily.
- Center section of modified grid was used for primary school, nursery school, mosque, eid-gah and greenery.



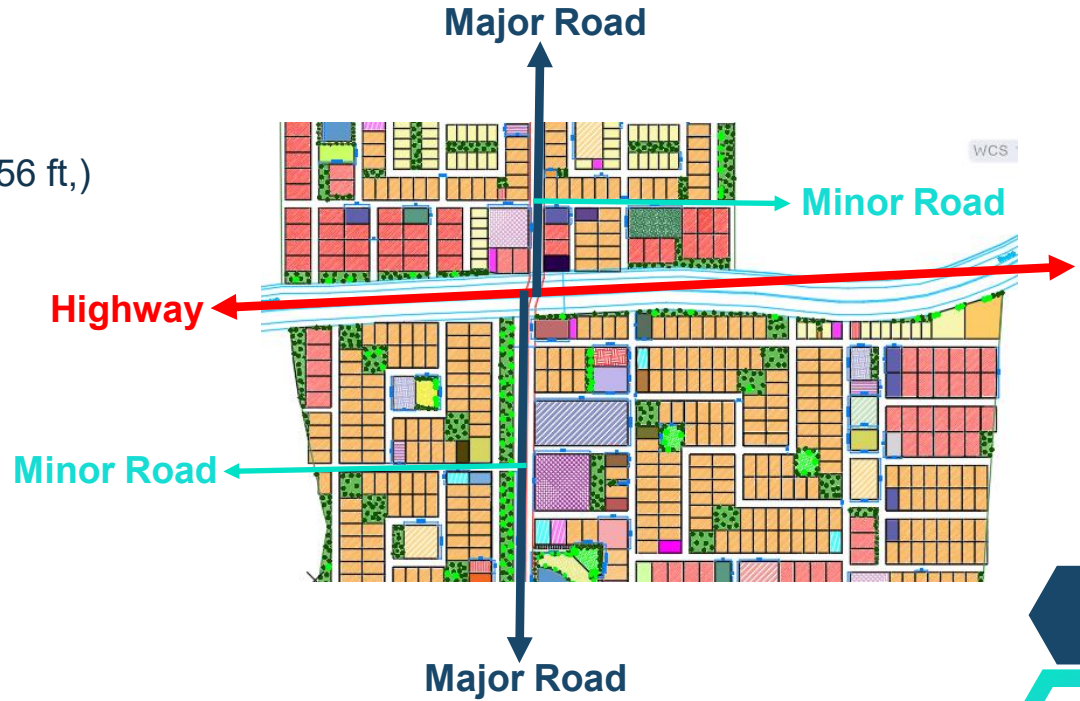
Cul-de-sac Pattern (Southern Part)

- One or two storied duplex building for residential use
- Parking facility and small yard.
- Provides privacy and calm environment
- Occurs less traffic hazard.
- Facilities are provided a bit further from the sac.



Road Width

- Highway (160 ft)
- Major Road (76 ft, 74 ft and 56 ft,)
- Minor Road (30 ft)
- Cul-de-sac
 - ✓ Major road (52 ft)
 - ✓ Minor road (23 ft)
 - ✓ Less vehicular circulation





Plot Size

Standard ratio of width and depth is 1:1.5 to 1:2.

Plot size of residential area:

Plot Area (katha)	Area (sq ft)	Depth (ft)	Width (ft)	Ratio
3	2160	60	36	1:1.67
5	3600	80	45	1:1.78
7	5040	90	56	1:1.61

- The ratio was also implied in other types of plot.





Set-back and Population Calculation

According to Building Construction Act, 1952, set-back was calculated.

Plot area (Katha)	No. of plot	No. of floor	Floor Area (sq ft)	Area per unit	No. of Unit	Household Size (avg)	Dwelling Unit	Population
3	169	6	1206	1206	1	6.5	1014	6591
5	603	6	2100	1050	2	5.5	7236	39798
7	121	7	2700	900	3	4.2	2541	10672
3 (Cul-de-sac)	556	1			1	5.5	556	3058
						Total	11347	60119

According to **Population and Housing Census, 2011**,

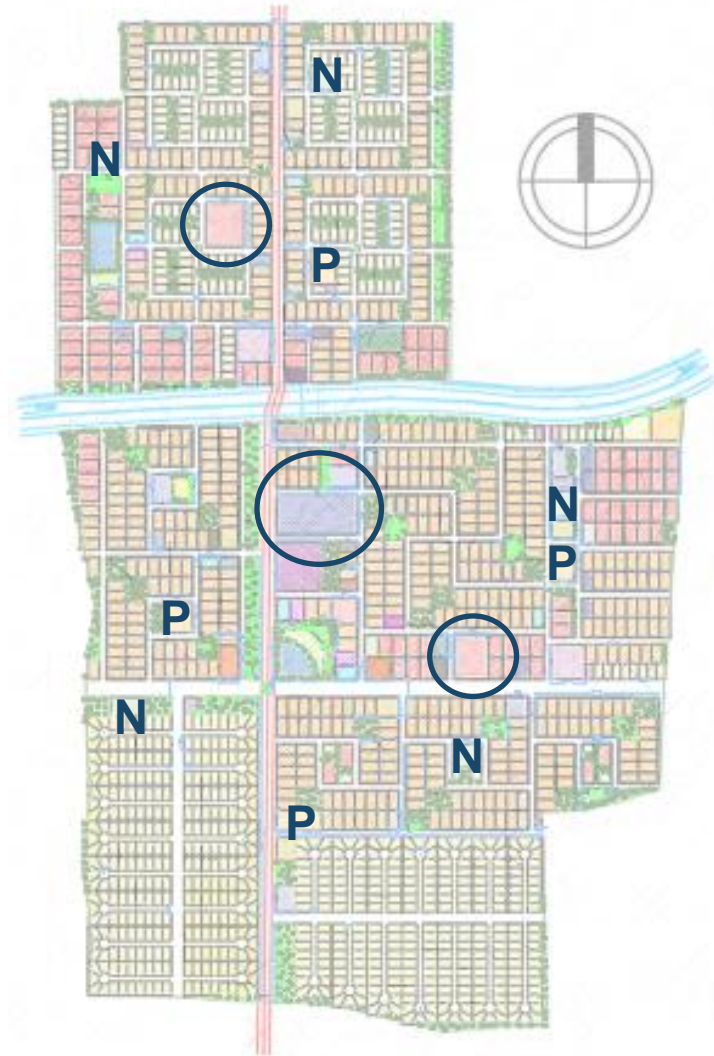
The average household's size in Bangladesh is

- 4.4 persons per household in 2011 and
- 4.8 persons per household in 2001.



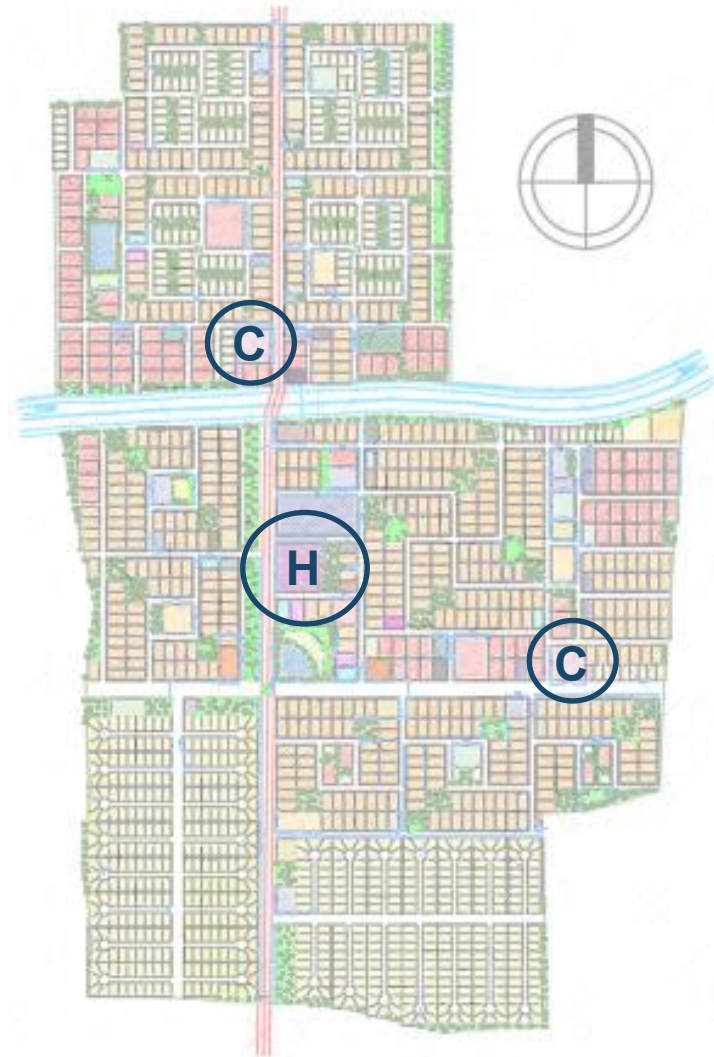
Education Facilities

- 1 college was placed in center beside the major road.
- 2 secondary school
- 4 primary school
- 5 Nursery schools were distributed equally near the minor roads so that children don't travel far to go to school.



Hospital and Clinic

- 1 Hospital is in a center position beside a major road for accessibility of everyone in neighborhood.
- 2 clinics were equally distributed. One above the highway and one below the highway.





Community Facilities

- More than standard area.
- Provided for regular and occasional use.
- In order to increase **social bonding**.

Community Centre	
Community Hall	1
Gymnasium	1
Library	1
Sport Club	2
Cultural Club	1
Entertainment Center	1
Public Toilet	1
Movie Theatre	1
Small Museum	1
Art Center	1
Orphanage	1
Day Care Center	1
Child Care Center	1
Hostel	1
Hotel	1

Mosque, Eid-gah and Temple

- 5 mosque
- 1 temple
- 1 eid-gah beside a mosque which is normally used as playground (without the occasion of Eid).





Shops

- 3 types of shops:
 - i. Grocery Store
 - ii. Super Shop
 - iii. Market
- Shops were distributed equally within a short distance in the neighborhood.
- Used for buying daily necessities.
- Restaurants, coffee shops and pharmacy.

Shop Type	Quantity
Grocery Store	6
Super Shop	5
Market	5
Restaurant	4
Coffee Shop	2
Pharmacy	5

Other Facilities

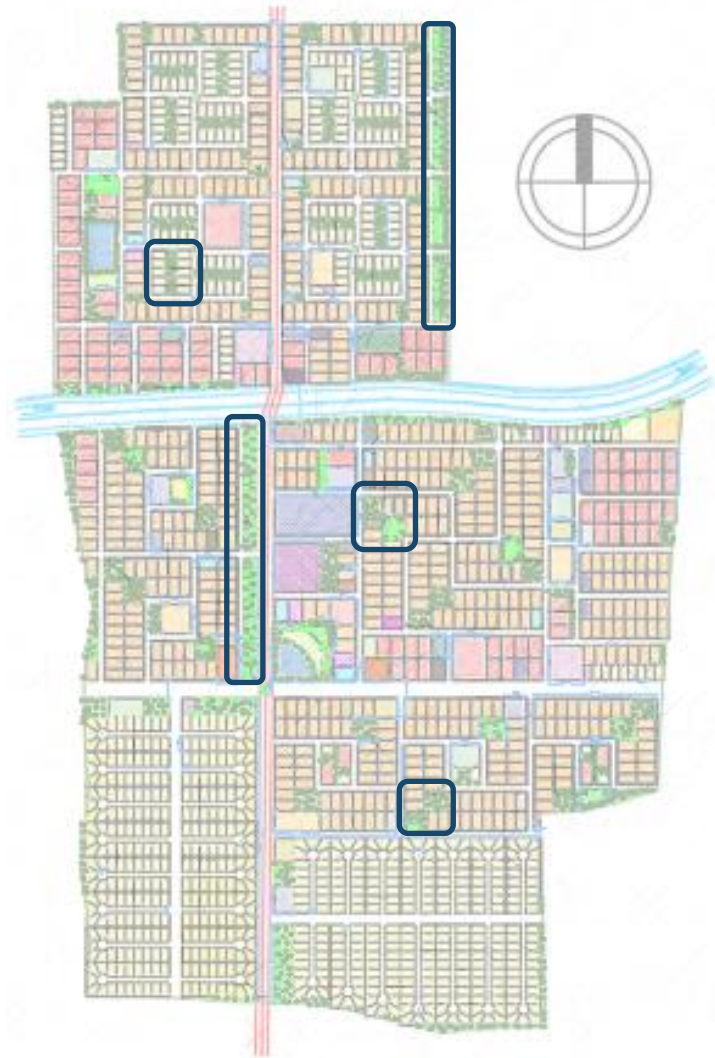
- 1 bus stand
- 1 refueling station
- 1 courier service
- Beside the highway
- For a better communication
- Bank and ATMs for money transaction.
- Post office and police station.



Others Facilities with Quantity	
Government Department	1
Office	7
Courier Service	1
ATM Booth	5
Post Office	1
Bank	1
Refueling Station	1
Bus Stand	1
Police Station	1
Parking Lot	2

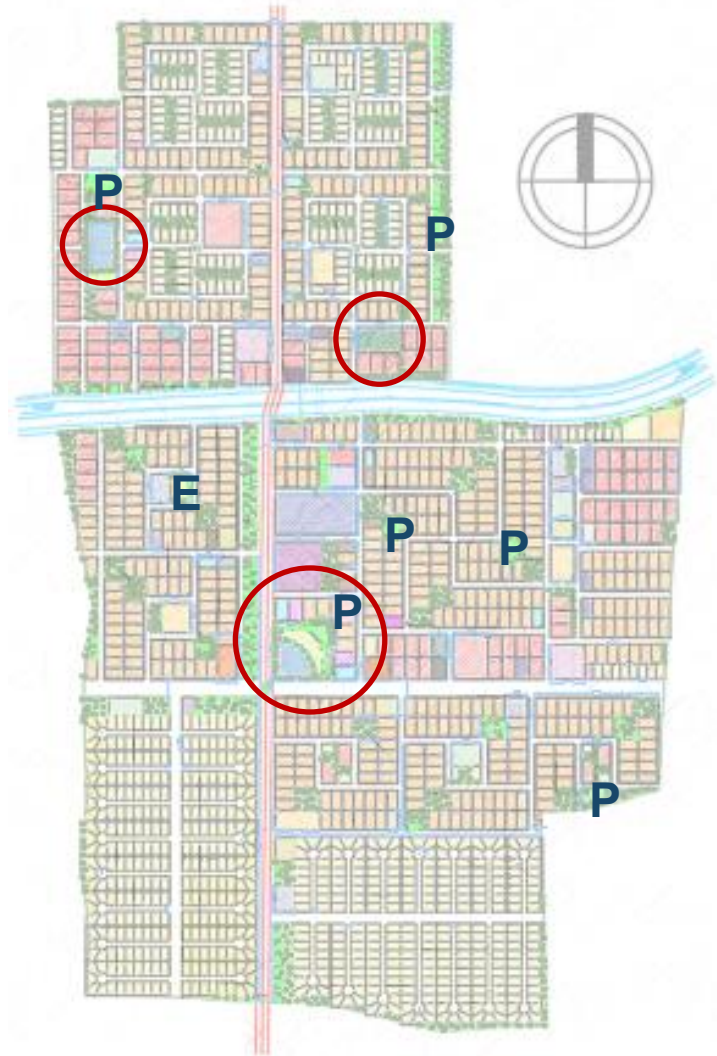
Greenery

- To create an environment friendly neighborhood.
- In the housing groups.
- On the periphery area.
- Trees and bushes beside the highway and major roads.
- To separate the residential areas from vehicular noise and pollutions.



Public Open Space

- 1 park
- 1 botanical garden
- 2 lakes
- Sidewalks with trees were given around the lake to separate the area.
- 7 playground (including Eid-gah)
- Some areas of playground were used for school playground.



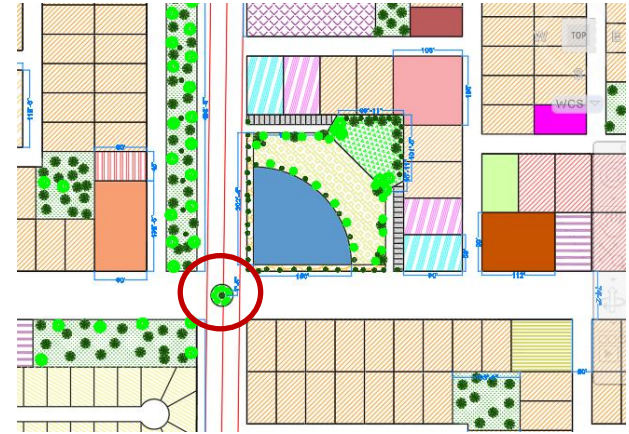
Neighborhood Centre

- Lake, park and a playground were placed in the centre.
- Restaurant and coffee shops beside them.
- A movie theatre was also placed there.
- Parking lot and sidewalks with trees.
- Separate with rows of bushes and tress.
- A neighborhood traffic circle in the intersection.



Neighborhood Traffic Circle

- In the intersection of 2 major roads with greeneries.
- Heavy traffic is not a concern.
- To reduce vehicular speed.
- In order to reduce unwanted accidents.
- 4 Neighborhood traffic circles on the north part of highway.





Facility Distribution of the Neighborhood Plan

- Based on North and South part of the highway.
- Not to cross the highway for any urgent facility.
- College and Hospital on the south part of the highway.
- High rise residential buildings (6-7 floor).
- More community facilities for socializing.
- More green space.
- Economic with more population.
- Environment friendly neighborhood.





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Thank You

