

# Integrated Freight Complex cum Wholesale Markets at Gazipur - Trans Yamuna Area

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(Textile, Textile Products, Leather Medicine and Pharmaceuticals, Eggs, Poultry, Fish, Fruits & Vegetables, Grains, Fodder, Building Materials & Hardware, Iron & Steel, Paper and Stationery, Auto parts and Machines, Timber, Marble, Booking & Forwarding Agencies, Warehousing & Go downs, Truck Repair Workshops, Idle Parking & Common Facilities)

## 1. Provisions given in Master Plan of Delhi (MPD)-2001:

### (i) Integrated Freight Complexes.

MPD-2001 has identified 4 large and one small freight complexes with the following: i) Patparganj-60 hect.; ii) Madanpur Khadar-50 hect.; iii) Dwarka-50 hect.; iv) Narela- 55 hect. and v) Najafgarh -4 hect. i.e. in a **total area of 219 hect.** These freight complexes are proposed to be integrated with wholesale markets and would have following **basic functions**:

- a) To provide facilities for **regional and intra urban** freight movement
- b) To provide facilities for freight in transit as well as **inter-change of mode.**
- c) To provide **warehousing and storage facilities** and interlink these sites with specialized markets like iron & steel and building materials; hosiery, plastic, leather and PVC; auto motor parts and machinery; fruits & vegetables.
- d) To provide **servicing, lodging and boarding. Idle parking, restaurants and other related functions** in the complex.

These freight complexes would discharge functions at regional and metropolitan level. Local wholesale markets of medium sizes are

required to enable distribution of commodities from these complexes to the retail outlets. Such local markets also need to be dispersed throughout the city. These should have parking, repair and servicing facilities. They could be either integrated with the commercial centers or provided separately at the selected number of modes or lines of movement.



## **(ii) Wholesale Markets**

In 1981, there were about 24,600 wholesale shops and connected establishments in wholesale markets in Delhi with 12,000 commodity handling shops (at the rate of 2.21 per 1,000 populations). Most of the wholesale markets are located in the congested central part of Old Delhi, and were established during the late 19<sup>th</sup> and early 20<sup>th</sup> century. The survey of goods movement revealed that out of total inward traffic (exclusive of by pass) 25 per cent had destination in Zone 'A' i.e. Walled City of Delhi and Kashmere Gate Area.

The wholesale markets are dealing with 27 major commodities. The largest textile and its products located in Chandni Chowk and

Maliwara followed by auto-parts and machinery located Kashmere Gate Area. Rankwise, other wholesale commodities are fruits and Vegetables (Azadpur Market), hard-ware and building materials (Chawri Bazar and Nai Sarak), food items (Khari Baoli) and iron and Steel (Naraina) etc.

To develop successful modern wholesale markets, these should be integrated with the freight complex/ truck terminal where the wholesale business could be operated more efficiently in a better physical, social and ecological environment.

In MPD-2001, an area of 411 hect. was proposed with the following brech of 5 locations i.e. 111 hect. in East Delhi; 108 hect. in Madanpur Khadar; 75 hect. in Dwarka; 109 hect. in Narela and 8 hect. in Najafgarh. Site at Najafgarh has already been implemented by D.A.M.B.



## 2. Decision of the DDA

The Authority resolved and approved in principle the proposal for planning and development of integrated freight complexes-cum-wholesale markets subjects to the following:

- i) Narela and Gazipur integrated freight complexes including the wholesale markets should be taken up for planning and development and execution immediately.
- ii) Secondly, it should be studied whether Maharashtra Act (1983) with respect to wholesale markets should be extended to the National Capital Territory of Delhi or it would be preferable to amend the Delhi Agricultural Marketing Board Act to include other than agricultural produce markets.



### 3. Project of Integrated Freight Complex-cum-Wholesale Markets at Gazipur (Trans Yamuna Area)

In East Delhi, there were two locations in the master plan of Delhi 2011, one at Loni Road and the second at Gazipur. The first site was used by DDA for the construction of Group Housing. As such, all the wholesale markets required for 27 lakh population and freight complex have to be accommodated at Gazipur. **Different types of proposed wholesale markets, freight complex and activities at Gazipur would be as under:-**

<b>Commodity/Activities</b>	<b>Area in hect.</b>
Textile & Textile products	11.0
Auto-Parts and machinery	7.9
Fruits & Vegetable & future needs	28.2
Hardware and building materials	11.6
Iron & Steel	6.8
Timber	5.9
Food grains	6.8
Leather	4.6
Junk market	3.1
Medical & Pharmaceuticals	3.2
Electrical & Electronic goods	3.9
Eggs, Poultry & Fish	11.7
Fodder	5.1
Paper & Stationery	3.6
Marble	3.7
Booking & Forwarding Agencies	14.5
Warehousing & Go downs	18.0
Workshops	3.4
Idle parking	19.3
Community Facilities	10.2
<b>Total*</b>	<b>182.0</b>

Note\* : Above areas are tentative and would be modified after getting actual demands from the buyers and checking the feasibility from the site. Out of 182 hect., 69 hect. is for roads and 9 hect. for parks. This gives a percentage of 57.2 for useable area and the balance 42.8 for circulation and green.

#### **4. Position of Acquisition of Land**

There is an area of 180 hect. in two villages namely; Gharoli and Gazipur. 90% of the area is acquired one without litigation and encroachments.

#### **5. Results of primary and secondary surveys have been given in Appendix No. 1.**

## 6. Objective of the Scheme

- i) To make Trans-Yamuna Area independent to a large extent in terms of movement of goods and vehicles and not to depend on other parts of Delhi (in the west of river Yamuna). This complex would be adequate to serve a population of 27 lakh of TYA by the end of the century.
- ii) To decongest Trans Yamuna Area by shifting existing wholesale agriculture and non-agriculture commodities markets like : fruits & vegetables, grains and pulses, Gandhi Nagar market etc.
- iii) The complex would have catchment area not only within Trans - Yamuna of NCTD, but of adjoining settlements of Loni, Sahibabad, Ghaziabad, Noida etc.
- iv) To decongest border areas of NCTD and UP.
- v) To fulfil one of the objectives of the Master Plan of Delhi-2001.
- vi) To set an example of designation of the complex with modern system of a) handling of goods, b) coordination of movement and parking of vehicles, c) disposal of solid waste, d) cleaning of the complex and last but not the least good urban form.
- vii) Hardly 20% of the units are expected to be allotted to units in other parts of Delhi.

## 7. Description of the Proposal

### 7.1 Division of the Complex in three distinct parts

#### i) Area in the North of NH-24;

To accommodate wholesale markets which are cleaner, require transport activities/ trucking activities and less movement from and to the markets. In this group comes wholesale markets of – i) textile and textile products; ii) leather, iii) medicines and pharmaceuticals; iv) junk market; v) Electrical and electronic goods; vi) Idle parking and vii) common facilities.

**ii) In the south of NH-24, but in the north of Hindon Cut and east of Gazipur Dairy Farm.**

This part is to accommodate agriculture product commodities, namely i) poultry and eggs; ii) fish; iii) fruits & vegetables; iv) fodder; v) idle parking and vi) common facilities. Planning development, construction and management of all these markets should be with Delhi Agricultural Marketing Board.



**iii) In the south of Hindon Cut.**

This part would accommodate two components a) wholesale markets concerning to bulky materials requiring maximum trucking activities and b) freight complex.

- a)** In the first part, there would be six wholesale markets i) building materials, hardware ii) iron & steel, iii) paper and stationery; iv) marble; v) timber and vi) automobile spare parts and machine.
- b)** Under freight complex, this would have – i) booking and forwarding agencies; ii) warehousing and go downs; iii)

truck repair workshops; iv) idle parking; v) common facilities.

**iv) Connected Residential Accommodation with IFCM**

It can be provided later on at the site at present occupied by Kondli Cattle Dairy Farm.

**7.2 Problems of traffic and transportation**

Principles adopted to solve the problems of traffic and transportation of integrated freight complex-cum-wholesale markets. This is proposed on the basis of report prepared by School of Planning & Architecture.

- i) After conducting primary and secondary survey by School of Planning & Architecture and based on its results, the entire traffic has been controlled at two points on NH – 24; one with Road No. 56 and another with Road to Mohan Nagar. On these two points clover leafs with grade separators have been proposed to have continuous flow of traffic.
- ii) Heavy vehicles would move on the major roads with a r/w of 30, 45,60 and 90 mtr.
- iii) Most of the movements of fast moving vehicles are left turning except at few points. Whereas right turning movements are there, these are a grade separator/clover leaf. Only at a one point i.e. at the junction of NH – 24, Mohan Nagar Road and newly proposed 60 mtr. wide road, traffic coming from Ghaziabad and wanting to enter in the wholesale market in the north of the highway has to take a 2 Km longer route via road No. 56 and 24 mtr. wide road. It is clarified that in this direction, there would be much less traffic.
- iv) Wholesale markets in the north and south of NH-24 have no relationship in terms of administration, nature of goods and type of movements. These have been divided into three parts based on their characteristics.

- v) Any truck parking of more than one hour would be in idle parking  
Short term parking would be in front of shops.
- vi) Heavy vehicles movement in the complex/sub-complexes would be monitored and controlled by electronic computer system installed in a central office in common facilities areas. For this, a study is being awarded to the consultants.
- vii) Parts of two clovers-leafs; one between NH – 24 and Mohan Nagar Road and second dividing the freight complex and wholesale markets are in U.P.territory. For this, negotiations have to be made with NOIDA and GDA authority to exchange the land between GNCTD and them. For this, interactions are being done with various concerned authorities and also with NCR Board.
- viii) Movements of local buses (DTC) would also be on the roads of 30 mt. and above. Position of bus queue shelters and three terminals would be shown in detailed planning.
- ix) Movements of light vehicles and pedestrians would be incorporated at the times of detail planning by the consultants of each three parts on the principles of segregation.
- x) Cross section of various roads.
  - a) National Highway at +4 mtr. + 7 mtr. , and at + 1 mtr. 3+3 lanes with central verge at +4 mtr. and + 7 mtr. and 4 lanes on either side at + 1 mtr. for left entry and exit of vehicles.
  - b) 60 mtr. r/wat +- 0 level (Road No.56); 3 lanes on either side of the central verge for fast moving traffic and two lanes towards large storm water drain and three lanes towards Gazipur Village.
  - c) 45 mtr. r/w at + - 0 level. Three lanes on either side of central verge for local traffic and two lanes for entry/exit to shops and also for casual/short term parking.

- d) 30 mtr. r/w at + - 0 level; 4 lanes with no central verge for local traffic. These roads will not have any service road but there can be casual parking.
- xi) Designing of clover leaf, grade separator and sub- ways; detailing of these would be as per IRC Norms.
- xii) For design of bridges over hindon cut and one master plan road of 45 mtr. width along hindon cut canal; UP Irrigation Deptt. would be consulted.
- xiii) Before adopting these cross-sections, proper research would be done, may be with the help of CRRI.

### 7.3 Physical infrastructure and services

- i) Adequate **utilities and services** in terms of raw water for washing of trucks, potable water for human consumption, sewage disposal, collection and disposal of garbage, drainage, telephone lines, electric lines, close circuit TV system.
- ii) Development of **parking areas** for different types of vehicles namely- light vehicles (car, scooter, etc.), cycles, heavy vehicles (trucks and tempos) for active as well as for passive parking.
- iii) The complex is very large and would involve lot of traffic movements, parking areas, utilities and services, disposal of solid waste etc. For this, following studies are being assigned to consultants:
  - a) Management system of the complex in 180 hect. with three distinct parts within the complex and its management with other IFCMs at Narela, Madanpur, khaddar and Dwarka.
  - b) Mechanization of loading and unloading of goods in wholesale markets and freight complex.
  - c) System of collection, transportation, transformation, disposal and re- cycling of solid waste.

- d) Zoning regulations for use and reuse of vacated shifted units from the existing areas.
- iv) Location of dust bins, dhalaos, incinerators (if required) would be shown in detailed planning.
- v) For cleaning the complex, washing the trucks etc., water may be taken from hindon cut after taking permission from UP Irrigation Deptt.

**7.4 Space Standards to be used in detailed planning of each pocket. These standards can be modified after getting demands for intending buyers.**

Space standards in sq.mt. for various trucking activities given in above paragraph. These are based on experiences, various truck terminals designed by DDA. These sizes are indicative.

- Booking agencies; 100, 150, 200 and 250.
- Warehousing god owns; 200, 400 and 600.
- Workshops/truck repair centers; 50, 100, 200 and 400.
- Shops for spare part dealers; 20, 40 and 60.
- Shopping Centers; 10, 20, 30 and 40.
- Resting place for conductors and drivers, (400, 600 and 800), Dispensary (600 and 800), cinema hall (1000), fire station (2000), Telephone exchange (1000 and 2000), restaurants (1000 and 2000).
- Standard for provision of utilities and services i.e. raw water @ 1000 gallons per day truck, potable water @ 10 gallons per day per capita, telephone connections and electric load.
- Street furniture in terms of lamp posts, tree guards, sign boards, public telephone booth, enquiry booth, signange's

## **8. Economics of the Scheme**

### **8.1 General Principles**

- i) Expenditure in a freight complex-cum-wholesale market at Gazipur will be for:

- a) Acquisition of land (land already acquired and only 10% is under stay orders/litigations/encroached upon);
  - b) Cost of allotment of alternate urban spaces to affected families;
  - c) Internal development in terms of leveling. Dressing, provision of water lines, sewer lines, electric lines, drains, development of parks and sites for community facilities.
  - d) Peripheral development with regard to water, sewer and electric lines and drains.
  - e) Connection of internal and peripheral infrastructure with trunk water lines, sewer lines and electric lines;
  - f) Laying of trunk infrastructure;
  - g) Expenditure will also be made in development of parking sites and construction of buildings of essential community facilities namely- police post, dispensary, telephone exchange, weigh bridge, petrol pumps, rest rooms for conductors and drivers, shops of eatables, shops of general merchants, restaurants, dhabas, cinema hall, fire post, banks, association's office, garbage depot, close circuit TV system. Street furniture, namely – lamp post, tree guards, sign boards, public telephone booths, public inquiry booths, guide maps, electronic sign boards etc. would also be constructed. Landscaping of the entire area by way of plantation of thick shady trees along roads and other essential elements.
- ii) Receipts will be from the disposal of plots of various uses namely- booking agencies, spare part dealers, warehouses, workshops, shopping centers etc. and license fee to be charged from parking areas.
  - iii) Economics of the IFCM is that the entire cost of development and construction including of essential community facilities is charged from the beneficiaries & cost of maintenance from the license fee to be charged from parking area.

- iv) 25% of the units in each trade would be auctioned.
- v) To run the system, government may try to arrange loans for traders from financial institutions.

**8.2 Cost of the Project of freight complexes/wholesale markets in total area of 180 hect.**

**i) Tentative cost of the project for acquisition, development and construction of street furniture and some essential facilities.**

- a) Cost of acquisition of land @ Rs.16 lakh per hect. = Rs.28.8 crore; In this case the land is already available, but in the economics of the project this cost has to be added. Cost of 10% if the land which is under litigation/stay orders/encroached upon has to be paid.
- b) Cost of Trunk Development; This would include construction of master plan roads with grade separators/fly over's, under bridges etc., trunk water lines, trunk sewer lines, trunk storm water drains including bridges on drains, trunk power lines. Cost under this head would be @ Rs.250 per sq.mt. or Rs.25 lakh per hect. and on this basis, total cost would be Rs.45 crore. This would be met by the infrastructural agencies.
- c) Peripheral Development; this would include 18 & 24 mtr. wide roads, with peripheral water, sewer, drainage and power lines. This should be shared by beneficiaries and not from Plan Funds. Cost of this component is estimated at the rate of Rs.250 per sq.mt. or Rs. 25 lakh per hect. and for this, total cost would be Rs.45 crore.
- d) Internal development; cost of this factor which @ Rs.100 per sq.mt. or Rs.10 lakh per hect. and accordingly under this head would be Rs.18 crore.
- e) Cost of construction of street furniture and some essential buildings like of conveniences etc. Cost under this head is

Rs.100 per sq. mt. or Rs. 10 lakh per hect. and for this total cost would be Rs.18 crore.

- f) Cost of construction of individual buildings; cost under this head has not been added in the cost of the project as this would be calculated and borne by individuals.
- ii) **Mode of Payment by Registrants: Developed land is proposed to be offered to the registrants @ Rs.4000/-per sqm.**
- a) 10% of the price at the time of registration.
  - b) 15% of the price as first installment within six months.
  - c) 25% of the price as second, third, fourth installments at six monthly intervals.

**Study on  
Concept Plan for Integrated Freight Complex-Wholesale  
Market at Gazipur  
By  
Department of Transport Planning,  
School of Planning & Architecture, New Delhi**

**1. Primary Surveys**

The following field surveys have been conducted as part of data collection and compilation process.

- a) Classified Traffic Volume Survey.
- b) Origin & Destination Survey (Goods Vehicles)

The above surveys were conducted at 13 locations given under, covering outer of Delhi as well near the site selected to develop IFC at Gazipur.

- i) Badarpur Border on Mathura Road (NH-2)
- ii) Aya Nagar on Mehrauli- Gurgaon Road.
- iii) Rajokri Border on Delhi- Gurgaon Road (NH-8)
- iv) Kakrula check post on Najafgarh Road.
- v) Tikri Border on Rohtak Road (NH-10)
- vi) Shinghu Border on G.T. Karnal Road (NH-1)
- vii) Loni Border on Loni Road.
- viii) Giani Border on G.T. Shahdara Road (NH-24)
- ix) Bhopura Border on Wazirabad Road.
- x) Maharajpur Border on Delhi – Ghaziabad Road.
- xi) Gazipur Border on Gazipur Road.
- xii) Kalindi Kunj (Okhla Barage) on Delhi-Noida Road.
- xiii) Gazipur – Anand Vihar.

The O & D Survey of goods vehicles only was conducted on a sample basis. About 34% of the sample size has been achieved, i.e. about 15,671 vehicles were interviewed in this process.

Apart from primary surveys data, secondary data on road network, speed, wholesale markets and operators and agencies was also collected.

**2. Zoning System**

A zoning system has been evolved to appreciate movement pattern and interaction levels by spatial units. The zoning system would enable in appreciating the movement pattern and interaction of Delhi NCR and rest of the country. For this purpose, Delhi has been divided into 4 zones and rest of the country into 37 zones, which include NCR towns as separate zones.

### 3. Commodity Classification

The commodity classification has been devised, wherein 21 major commodities were identified and others were clubbed. In this compatibility with wholesale groups, the commodity grouping has been largely taken care of.

### 4. Traffic Characteristics

The salient traffic characteristics are presented under:

Total number of vehicles entering and leaving out	2, 01,024
Total number of goods vehicles entering and leaving out	46,148
Share of goods traffic to total	
- By no. of vehicles	23%
- By PCU's	49%

**Traffic Volume Levels in TYA are as under:**

Name of Road	Total	Goods
1. Loni Road	7453	3387
2. NH-24 (Giani Border)	11205	3091
3. Bhopura Border	14388	4280
4. Maharajpur Border	19212	2414
5. Gazipur (NH-24 bypass)	20590	3934
<b>Total</b>	<b>72848</b>	<b>17106</b> <b>(23.5%)</b>

### 5. Goods Tonnage

The salient goods traffic tonnage characteristics are presented below:

Total quantity of commodity	
- Entering out	1, 01,363 tonnes
- Leaving out	83,583 tonnes
- Total	1, 84,946 tonnes

Nearly 46% of total goods movements take place to and from TYA. Total quantities of goods by commodity type are presented in table below. The major corridors by commodity type and type of flow are presented in table below:

S.No. Commodity Type	Inward	Outward
1. Textile & Readymade Garments	Rohtak Road, Mathura Road, Gurgaon Road.	Mathura Road, Gurgaon Road, Shahdara Road
2. Auto Parts	G.T. Karnal Road, Gurgaon Road, Mathura Road	Gurgaon Road, Mathura Road, Karnal Road
3. Fruits & Vegetables	Wazirabad Road, Mathura Road, Loni Road	Wazirabad Road, Rohtak Road, G.T. Karnal Road
4. Hardware & Building Material	Mathura Road, Loni Road, Wazirabad Road	Delhi-Noida Road Delhi-Ghaziabad (Gazipur Rd)

5. Food Grains	G.T. Karnal Road, Wazirabad Road, Gazipur Road.	Gurgaon Road, Wazirabad Road, Rohtak Road
6. Iron & Steel	Shahdara Road, Mathura Rd. G.T. Karnal Road.	Gurgaon Road, Mathura Road, Karnal Road.
7. Timber	G.T. Karnal Road, G.T. Shahdara Rd. Delhi Ghaziabad Road	Gurgaon Road, Karnal Road, Mathura Road

## 6. Movement Characteristics

The salient points on movement pattern of goods traffic are:

Total Traffic	1, 84,946 tonnes
Destined in DUT	71,108 tonnes (41.2%)
Originated in DUT	58,104 tonnes (31.4%)
Through Traffic	50,734 tonnes (27.4%)

## 7. Pay Load Characteristics

Total number of goods vehicles	46,148
Number of empty vehicles	19,485 (42.2%)
Number of loaded vehicles	26,663 (57.3%)
Average pay load	
Entering out	6.97 tonnes
Leaving out	6.90 tonnes
Overall	6.94 tonnes

## 8. Desire Characteristics

The O-D characteristics of goods traffic in brief are as under:

### Inflow:

From DMA Towns	31.2%
From Priority Towns	7.3%
Rest of NCR	18.7%
Total NCR	57.2%
Rest of India	42.8%

### Outflow from DUT:

To DMA Towns	35.0%
To Priority Towns	12.8%
To Rest of NCR	7.5%
Total NCR	55.3%
To Rest of India	44.7%

Goods movement by distance reveals about 62.2% of inflow and 52.8% of outflow have more than 100 kms. load.

## 9. Projections & Allocation

The goods traffic projections have been made by the following two approaches:

1. Wholesale Establishment Forecast.
2. Trend Method

Total Estimated Quantum = 316749 T of commodity by 2011.

Share of seven major commodities = 58%

Total quantity of goods to be handled by Gazipur IFC.

- Inflow	68717 tonnes
- Outflow	51975 tonnes
- Total	120692 tonnes

Commodity composition and allocation to Gazipur is given under:

Textile	38%
Auto Parts	27%
Fruits & Vegetables	49%
Hardware & Building	
Materials	39%
Food grains	40%
Iron & Steel	35%
Timber	34%

