DESIGN GUIDELINES FOR STREET GRAPHICS

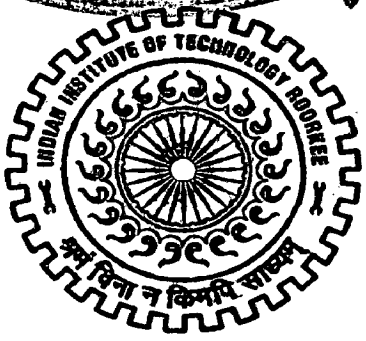
A DISSERTATION

Submitted in partial fulfillment of the requirements for the award of the degree of

MASTER OF ARCHITECTURE

By

RAVI JAIN



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ROORKEE - 247 667 (INDIA)

JUNE, 2008

CANDIDATE'S DECLARATION

I hereby certify that the work which is being presented in the dissertation entitled **'DESIGN GUIDELINES FOR STREET GRAPHICS'** in partial fulfillment of the requirement for the award of the degree of **MASTER OF ARCHITECTURE** submitted in the **Department of Architecture and Planning** of the Institute is an authentic record of my own work carried out during the period from July 2007 to June 2008 under the supervision of **Prof. Rita Ahuja.**

The matter embodied in this dissertation has not been submitted by me for the award of any other degree.

Place: Roorkee
Dated: June 27, 2008

(RAVI JAIN)

CERTIFICATE

This is to certify that the above statement made by the candidate **RAVI JAIN** is correct to the best of my knowledge.

Dated: Jun 27 2008

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ACKNOWLEDGEMENT

It is difficult to put into a few words the gratitude I feel for the assistance rendered by many individuals and sources for the completion of this dissertation. However I take this opportunity to acknowledge those who have given their valuable suggestions in shaping this study into a cogent form.

I would like to express my deepest gratitude to my guide **Prof. Rita Ahuja,** for her restorative guidance, encouragement and valuable suggestion throughout my project work. My sincere thanks also goes to **Prof. S.Y. Kulkarni,** Head of the Department, and all the faculty of Department of Architecture & Planning for all the encouragement, help and assistance given to me during my tenure in Roorkee.

I would like to express my thanks to Dr. S.K Misra sir, visiting faculty (Arch. & Plng. Dept.) for his brainstorming suggestion during class hours.

I would like to express my thanks also to my friends, Prakash, Mona, Bibhu, Seepika, Saumya Anil and Farheen. How could I forget to mention khan sir, Naghma bhabhi as well as Firoz sir and his family exceptionally for their cooperation and for making my stay at IIT, Roorkee, a pleasurable and memorable experience.

I would like to express my thanks to Sunny, Neeti for helping me during my case studies.

The acknowledgements will not be completed till I express my regards and thanks to my Parents & my brother for their blessings and prayers and also for their encouragement and support.

Dated: June 2008 **(RAVI JAIN)**

ABSTRACT

While walking on the street we are surrounded by media that provides us information about the environment. Street graphics is one of the extremely important form of this media, which includes private hoarding, signboards, traffic sign etc. These graphics guide us to reach our destination and improve our understanding about surrounding. Graphics does not communicate with people in a usual sense of exchange; rather they inform people about rules, activities and occurrence of various kinds.

Graphics in present scenario are seen as elements, which sadly disfigure the urban environment. On street, the observer is often overloaded by number of graphics competing for his attention and his privacy violated by advertising graphics which are irrelevant to his purposes. Often, useful or even essential information is missing; more often information is presented confusingly. There are many more problems that an observer is facing, on street, because of improper design and placement of graphics.

The thesis is an attempt to understand the problems related with these graphics through visual survey, case studies etc. Analyzing the importance of graphics in today's competitive world and to make graphics not just stucco elements but an integral part of our urbanization process by drawing up proper design guidelines.

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"One ad is worth more to a paper than forty editorials".

Will Rogers

CHAPTER 1

INTRODUCTION

Our spatial environment consists of land, buildings, transportation system, trees, water etc, is a part of communication system. In this environment, it comes as no surprise that we are surrounded by media from the moment we step outside. We see the stickers sticking over the dustbins, the homemade posters pointing us, etc. We are also seeing media in the form of graffiti, stickers, murals, street signs, flyers etc. All of them provide us information but we might not realize it because we do not educate or train people in this language and few learn to read it, subconsciously.

These street graphics do not communicate people in a usual sense of exchange; rather they inform people about rules, activities, occurrence of various kinds.

The more at home a man is, the less need he has for consciously designed information sources in his physical surroundings.

Earlier, in the pre-industrial times, there were no traffic control signs, no identification signs, no streetlights, no information centers. People knew each other and also their spatial environment. Only the stranger could be misled.

Today in this competitive world, we are the strangers, in our own areas. We even don't have to time to intract with our spatial system. Our support systems— the vast networks of government, commerce, transport, communications, education, health services, power, water etc— are remote and we have to wander from one place to another for fulfilling our requirements. And hence we require such graphics system that can give proper information while reading an urban environment. But the information supplied in the environment is largely irrelevant both to our immediate purposes or to an understanding of the world in which we live.

A simple task becomes more complex. All senses are stretched whenever one wants to purchase an object. From a simple soap to plywood-which one? From

simple bathroom slippers to tutorials for an entrance exam? All have large signages, shouting out loudly attracting as well as causing confusion. Not only private signs but also traffic signs creates confusion. Directional signs can be so numerous in a location that the important one is lost. Some times these traffic signs are presented in a very confusing manner etc.

The streets of any city relay thousands of conflicting messages. Competitive graphics, on the street, in which each graphics tries to over power all the other, is very difficult for passersby to read and make them so nervous that the observer may refuse to look or understand.

These graphics also acts as traffic hazard. "The distraction caused by the large sized signages significantly contributes to the rise in traffic accidents and accidents in inner cities". In Metropolitan areas the intense glare reflection caused by these graphics adds to the visual strain people experience while driving. The inherent structural instability can cause them to collapse while their unplanned location causes even more danger to pedestrians by block in their pathways.

Therefore information which is considered important must be presented directly, in the graphic visual language, as signs, poster, billboards. Because they are considered important messages they are designed for maximum impact and clarity especially when there are many signs competing with one another as in many metropolitan areas around the world.

All the talk about the graphics disfiguring the urban scene might be correct to an extent. But in a capitalist society money plays a more important role than art or aesthetics and it is easy to see what shall prevail.

What prevail is usually not correct but advantageous. This leads to conflict, which is not resolved due to an unwillingness to accept reality. Regulating agencies, Art critics and other self styled champions want to wish away graphics. The private signage designer lobby wants to wish the critics away. Neither one wishes to join the other to enhance the urban environment.

If on the other hand street graphics can be designed in coordinated patterns which are harmonious and supportive with city's structure, the result would be more pleasing and constructive communication from all graphics within the group.

Thus visual graphics communication design has become a new growing and important part of urban environmental design and it should be integrated and coordinated with architecture, open space design, elements, art works, transportation, and movement system and with goals and messages of the public and private groups which participate. This include not only obvious signs but other kind of communication- traffic signs, directional signs and forms, color coding of street, curb and paving elements. These are all parts of total overall coordinated street design.

Taking these sentiments as the starting point the study will look at the impact of graphics on the streets.

1.2 IDENTIFICATION OF PROBLEM

Street graphics in present scenario are seen as elements, which only disfigure the urban environment. As in many urban areas, the extent and variety of street signs has created a jungle of poles with Do's and Don'ts, threats and fines and special regulations that defy comprehension from a moving vehicle. Meanwhile, the person walking down faces a visual endurance test.

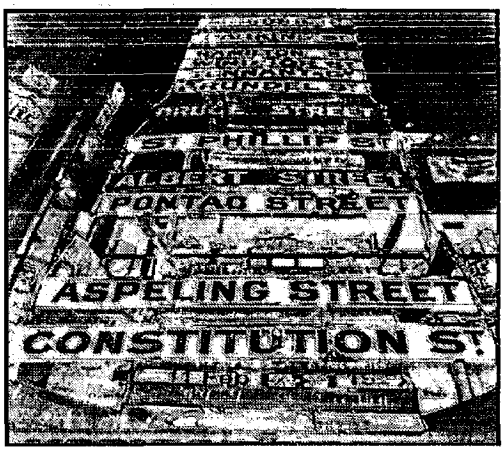


Figure 1.1 Placement of street names high above normal sight lines
Image source: www.istockphoto.com

Figure 1.2 Placement of directional signs above normal sight lines
Image source: www.gpsmagazine.com

The problem is not only the sheer multitude of messages, or their random placement high above the driver's normal sight lines. It is the cacophony of sizes, forms, colors, letter and word styles that render the eye unable to see, and the viewer unwilling to look. There needs to be an overhaul of these dominant graphic systems for clarity, logic and aesthetic order.

There are four major subsystems of public information:

a) Vehicular control

b) Parking regulations

c) Transit information

d) Public street and place markings.

These subsystems need to be separately grouped and placed but graphically integrated so that the information system, injects minimal disruption to the

environment while making maximum contribution to public safety and convenience.

Since most of the graphics come up without planning, it was quite inevitable that some things should have gone right while others completely wrong. Thus there is a need to analyze what went right and what went wrong and to evolve guidelines in order to achieve a certain 'right' solution. Keeping in view the need for an integral design and an aesthetic effect.

1.3 AIM AND OBJECTIVES

The broad aim of the thesis is that at the end of study and analysis I shall be in a position to, and will, propose a design guidelines / recommendations for Street graphics.

1. To identify the parameters that influences the graphics system
2. To identify the problems related with already existing graphics.
3. To identify the principles of graphics/signages.
4. To frame the guidelines for the priorities amongst different messages for improving the existing condition.

1.4 SCOPE AND LIMITATIONS

The study shall analyze street signages /signs as a part of information system and steps would be taken to reflect how signages are being used in the present scenario and how they influence the action of people.

1. Study will restrict to streets of metropolitan cities.
2. Study will restrict to roads within the cities.
3. The study will restrict to prime commercial streets.
4. Highways and roads that connect two cities / towns are beyond the scope of the study.

5. Roads that have substantial pedestrian movement and mixed vehicular pattern roads will be studied.

6. Does not probe deeply into the cultural symbolism of signs / lights

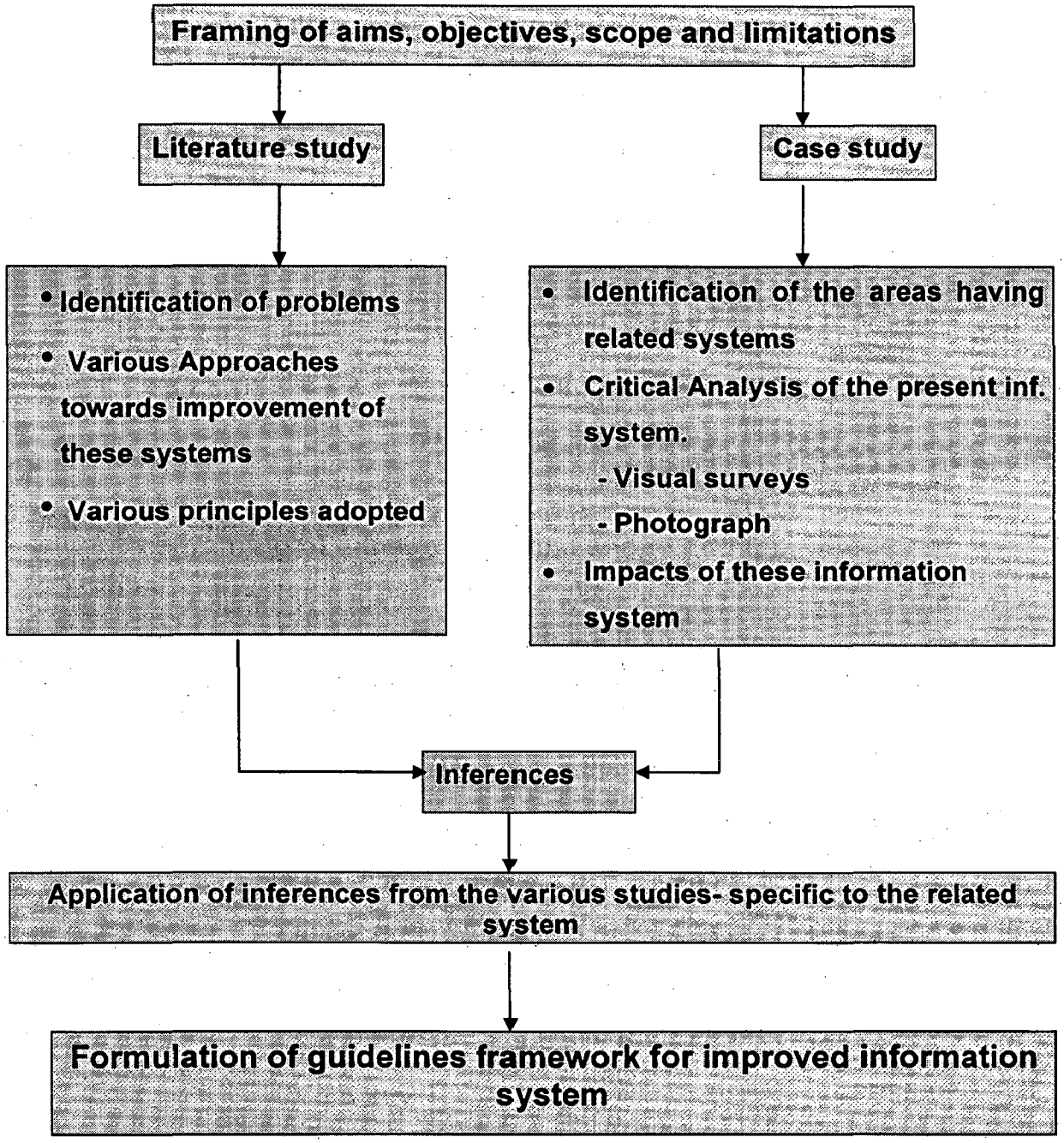
7. Recommendations are limited to those viewer who don't have eye sight problem like color blindness, etc.

8. The state regulations may differ from state to state, so only a general study of laws will be conducted.

9. Since the experience of the graphics are essentially visual, understanding and analysis of the effects is done only from the visual point of view.

1.5 METHODOLOGY

The method followed for achieving the objectives of the thesis shall be a series of steps. Each preceding step shall form the foundation for the development of following steps leading to the final culmination of all the study, analysis, thoughts and ideas to the proposal of design guidelines.



1.6 PROBLEMS AND POTENTIAL WITH EXISTING STREET GRAPHICS

Street graphics were installed to improve the understanding of the environment but in the present scenario they obscure the meaning of the environment as often as they clarify it. This condition is the visible result of a chain of causality which we see/ hear in our day to day life. Unlike many other urban problems, however, most of the problems of city signs and lights can be dealt directly.

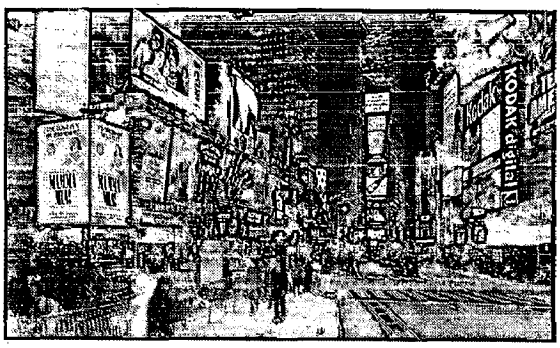


Figure 1.3 Times Square, dominance of private graphics,
Image source: laughingsquid.com

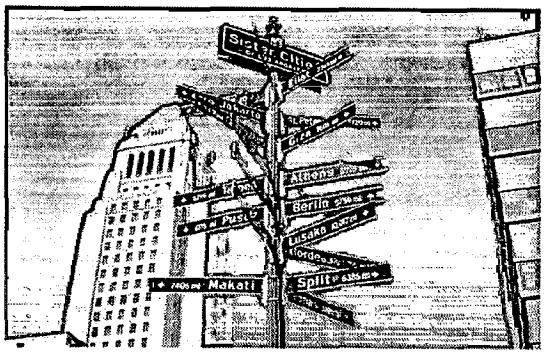


Figure 1.4 Directional signs create confusion
Image source: www.gpsmagazine.com

In cities today, the observer is often **overloaded by messages** competing for his attention or else his **view is dominated** and his **privacy violated** by advertising messages which are irrelevant to his purposes. Often, useful or even **essential information is missing**; more often **information is presented confusingly**.

Public activities and services are poorly identified and advertised. The form of communication is rarely expressive of the activity being communicated about. Systems conflict with one another and the authority to deal with them is fragmented.

Beyond correcting these excesses and deficiencies, city signages provide an opportunity to make significant improvements in the public environment. They can enable people to better under stand how the city fits together and how it functions, including its likely future development. Environmental information systems can express the structure of activities in the city

These graphics can also provide a means for the direct self-expression of both individuals and groups.

Priorities can be set for various types of information to reduce conflicts. Greater coordination may be possible even without changing administrative structure.

Thus, signages are potentially powerful but sadly neglected resource in making cities more meaningful and pleasurable. It argues that public and private signing should be planned as an interrelated set of information systems.

Taking all at the same place the problems with the graphics that we are facing while walking on the street:

1. Overload
2. Dominance
3. Unavailable Information
4. Confusing Information
5. Obscure Public Services
6. Activity poorly expressed
7. Conflict

1.6.1 OVERLOAD

In typical Commercial Street, privately owned graphics are primarily designed and placed to capture attention, only secondarily to inform.

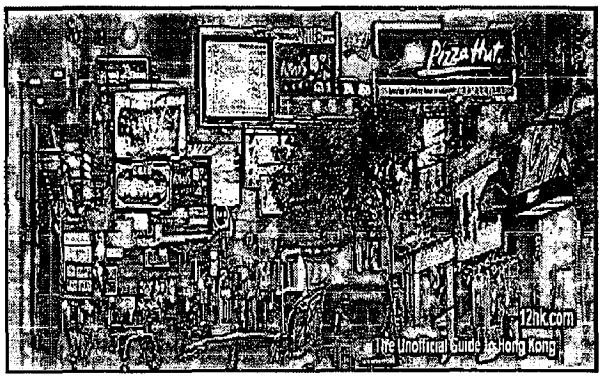


Figure 1.5 Overloading of private graphics
Image source: www.urban75.org

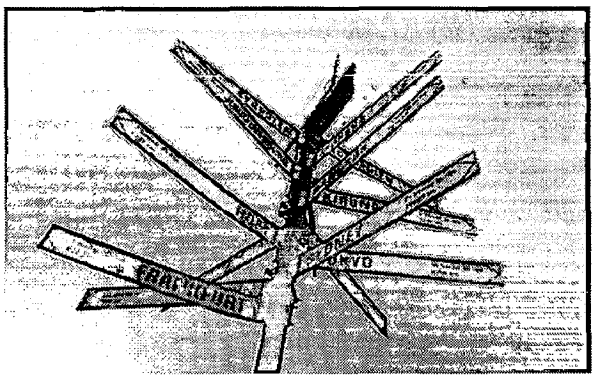


Figure 1.6 Overloading of directional signs
Image source: www.gpsmagazine.com

Sign designers ignore buildings and architects ignore signs. And this results in a cluttered streetscape.

Human capacity for receiving information has limitations. As a result, the person is often overloaded with number of messages. Attention which may given to more useful information is diverted by the present landscape of street signs, and the information capacity of the public environment is wasted.

Directional signs can be so numerous in a location that the important one is lost. Many competing private signs can make it difficult to find one particular establishment.

1.6.2 DOMINANCE

Where unlimited competition is the rule, the most powerful competitors will dominate. On typical Commercial Street, these are the outdoor advertisers that are dominating over other because of their "super-signs" larger, better illuminated and more attention demanding than those of local establishments, they are also organized by a relatively efficient system which pre-empts the most visible locations.

(a) (b)

Figure 1.7a, b Dominance of private graphics; *Image source*: www.jujuwebdesign.com/photos/USA

They skew communications systems so that local information is obscured and particular destinations are made more difficult to find. Large sized graphics located over highways and at major intersections are safety hazards because they distract the driver's attention.

1.6.3 UNAVAILABLE INFORMATION

Some information that is essential and is potentially useful is unavailable. Streets go nameless, street numbers are missing, rules of the road are not stated. We rarely see city maps and directories in our streets, and potentially valuable information about the functioning, ecology, history, and future of the city is missing.

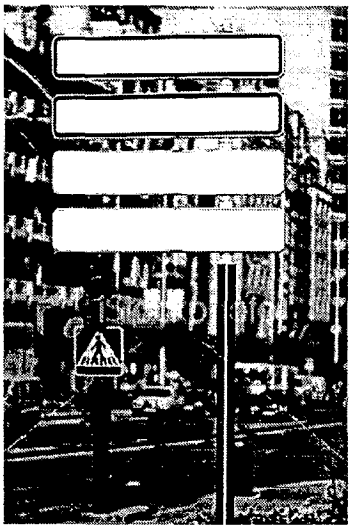


Figure1.8 Unavailable information
Image source: www.flickr.com

Properly designed graphic form of new traffic control and directional signing can improve the appearance of the street as well as traffic safety and guidance. New sources of information for people on foot can also enhance the appearance and the life of city streets.

1.6.4 CONFUSING INFORMATION

Available information is often confusing. Naming systems, for instance, are unreliable. In Indian context, minor intersections are often named for honored dead, but these designations are rarely found on any street map or directory.

Figure1.9 Confusing arrows signs
Image source: www.istockphoto.com

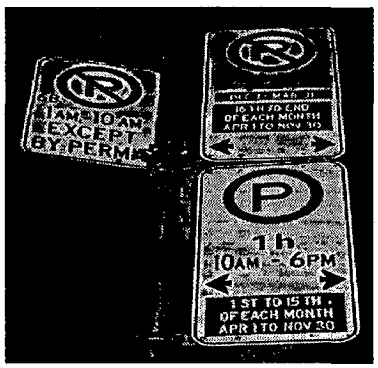


Figure1.10 Confusing parking/ no parking sign
Image source: www.flickr.com

There are other common confusions in terminology. Curbs signs use the terms "loading," "stopping," "standing," and "parking," but these distinctions are not clear to most people and are usually ignored. Directional signs are presented very confusingly

As frequently, message systems are inconsistent and the same route is designated differently in different places.

Also, when entering or leaving a city, it is difficult to know which road signs refer to local city destinations and which to distant places.

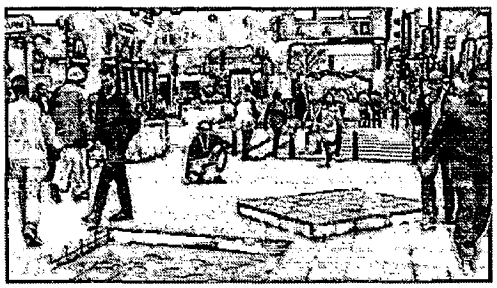


Figure1.11 3-dimensional art work on street creating confusion
Image source: www.geocities.com

1.6.5 OBSCURE PUBLIC SERVICES

Phones, mail boxes, fire hydrants, are inconsistently located and poorly identified. They are scattered in random locations. At night they are often unlit.

Major services such as public transport are also poorly identified. Transit stations are normally not visible from a distance, Identification of other public activities and facilities is often not visible.

Hospitals and government offices of all kinds are poorly identified. Even when these areas are located nearby, there is normally no signing system to guide people to these important locations.

1.6.6 ACTIVITY POORLY EXPRESSED

Good signing and lighting should go beyond minimal provision of basic information. Meaningful messages touch our consciousness on many levels, and the best graphics will be expressive of the thing signified with all its over tones.

Our cities are notably lacking in messages which express the activity symbolized. Signs look alike whether for restaurants, gas stations, etc.

Signs may also be designed to be more expressive by drawing on common associations to reinforce their message. Direct views of the activity itself are usually more expressive than any abstraction or symbol.

The signscape would be more expressive if most signs were associated directly with activity - if beer signs only occurred on breweries or bars. It might also be possible for a signing policy to encourage non-verbal signing.

1.6.7 CONFLICT

Messages are organized and presented in ways that are often in direct conflict with public information needs.

"Motorists face a task increasingly like trying to read a newspaper and a novel watch television and listen to the radio all at once".

A car driver must pay attention to other drivers and pedestrians, watch for signs and signals describing the rules of the road, and at the same time look for clues to his direction and destination; while he is doing this, he will normally be distracted by advertisements to entice him into local shops or to buy a national product or service.

At major intersections, drivers are often faced with billboards which dominate the visual field by size, location, and contrast and in these same locations, it is common to find huge facade signs advertising local businesses.

One method for avoiding conflict is by visual channeling in relation to familiar patterns of looking. By this system, each type of information would have its own environmental zone with the most important information centrally located in the visual field. Such a system would be designed to reflect public priorities; it would also enable users to be efficient in finding various types of information. Channeling is already a familiar principle for dealing with conflicting traffic flows.

It takes a big idea to attract the attention of consumers and get them to buy your product. Unless your advertising contains a big idea, it will pass like a ship in the night.

David Ogilvy

CHAPTER 2

GRAPHICS AND ITS CLASSIFICATIONS

2.1 CLASSIFICATION OF GRAPHICS

A viewer is facing no. of messages, through graphics, while walking on the street. These graphics are presented in number of formats like traffic sign, billboards, banner, etc. Now these graphics are classified on different basis for eg. On the basis of their location, their function as well as on the lighting arrangement that are installed over these messages etc.

2.1.1 CLASSIFICATION OF TRAFFIC SIGNS/ GRAPHICS:

1. Danger signs
2. Caution signs
3. Mandatory signs
4. Prohibitory or Restrictive signs

1. Danger signs:

Danger signs shall be used only when immediate hazards exists.

Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording.

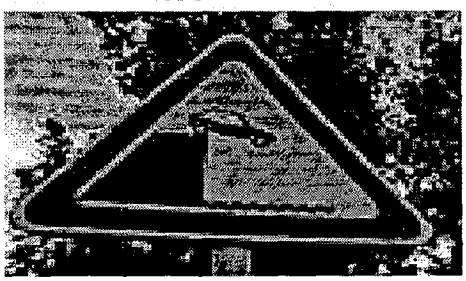


Figure 2.1 Danger sign is warning vehicles about a quay, Source: Wikepedia.org

2. Caution signs:

Signs used only to warn against potential hazards or to caution against unsafe practices

Caution signs shall have yellow as the predominating colour with message/symbol & border in black. There's also a lower yellow panel for additional sign wording. Here black lettering shall be used

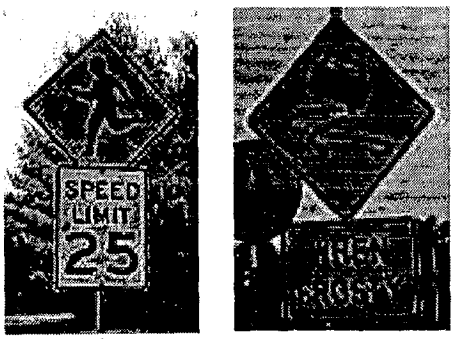


Figure 2.2 a, b, Caution sign Image source: wikipedia.org

3. Mandatory signs:

Mandatory signs are road signs which are used to set the obligations of all traffic which use a specific area of road.

Unlike prohibitory or restrictive signs, mandatory signs tell traffic what it must do, rather than must not do.

Figure 2.3 Stop sign (mandatory)
Image source: wikipedia.org

Figure 2.4 Traffic control sign
Image source: wikipedia.org

4. Prohibitory or Restrictive signs

These signs are usually circular with red borders. Most signs have white or yellow background. A slash is used in certain countries to prohibit something

Figure 2.5, Sign prohibiting the entry of bicycles
Image Source: biketoronto.ca/topic

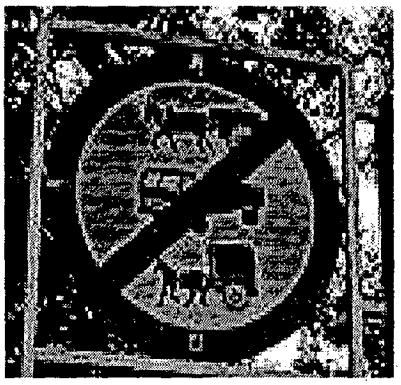


Figure 2.6 Sign prohibiting the entry of trucks, bullock and horse carts.
Image Source: wikepedia.org

2.1.2 GRAPHICS ARE ALSO CLASSIFIED AS:

1. Directional
2. Commercial
3. Directional and commercial

1. Directional Sign

These signages are put up at specific location for displaying prominently directions, instructions and identities.

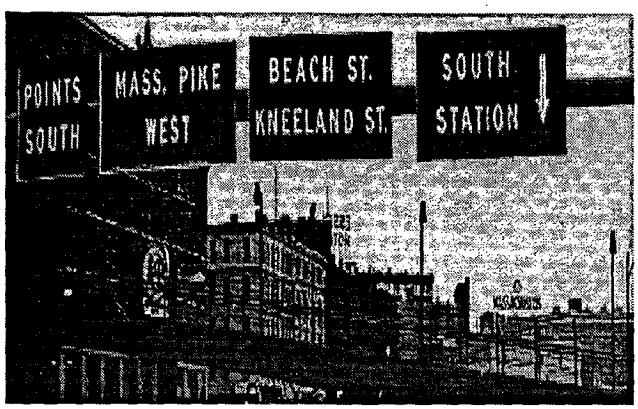


Figure 2.7 Directional signs.
Image Source: Carr, Stephen - City Signs and Lights

2. Commercial Signs

These signage are put up mainly for the promotion of products, brands etc. Sometimes they are used for social messaging and charity. Hoardings, bus shelters, glow signs, kiosks are some of the examples

Figure 2.8 Commercial signages.
Image Source: author

3. Directional and Commercial

These signages are put up for promotion of products, brand etc. and servicing as directional aide to local advertiser (Retail outlets, fast food points, restaurant, hotels etc.)

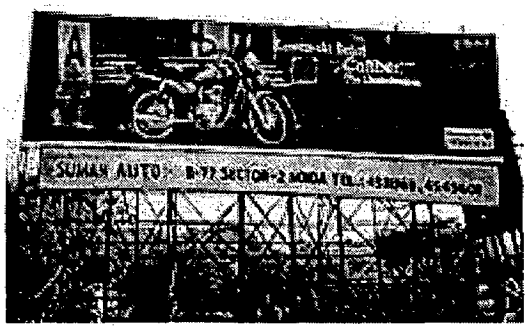


Figure 2.9 Directional & commercial signage
Image Source: author

2.1.3 GRAPHICS ARE ALSO CLASSIFIED (on the basis of their location)

1. Indoor
2. Outdoor

1. Indoor

Signage inside buildings not exposed to outside environment is known as Indoor signage. Posters, translates, floor graphics are some of the examples.

2. Outdoor

Signage outside buildings exposed to outside environment are known as outdoor signage. Traffic signs, hoardings, glow signs, bus shelters, kiosks are some of the examples. The material (paper, film, vinyl) and the inks (pigment) for producing signage are water and UV resistant. More expensive but durable than indoor material and inks.

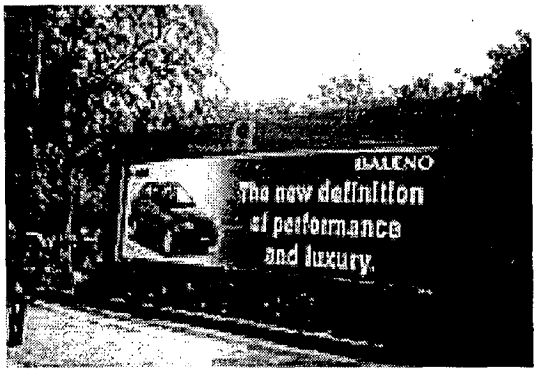


Figure 2.10 Outdoor graphics; Image Source: author

2.1.4 GRAPHICS ARE ALSO CLASSIFIED (on the basis of lighting arrangement that are installed over these signages)

1. Frontlit

2. Backlit

1. Frontlit

Signages lit from the front side are known as frontlit. Hoardings, kiosks, arches, bus panels are some of the example.

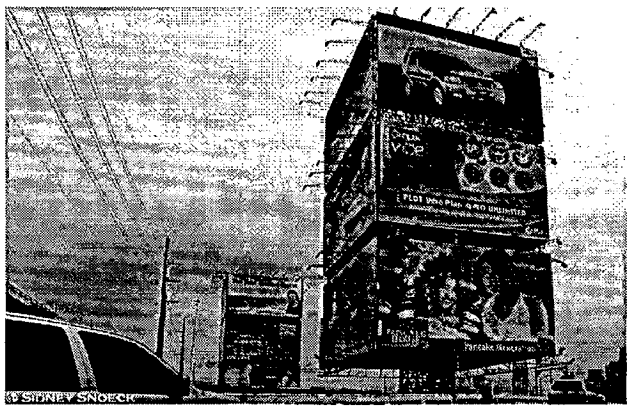


Figure 2.11 Frontlit graphics
Image Source: author

2. Backlit

Signages lit from backside are known as backlit. Bus shelters, glow signs are some of the examples. The material used is different from used for front lit signage. Translucency of material is important for making backlit signs.

Figure 2.12, Backlit graphics
Image Source: outdooradvertising.blogspot.com

2.1.5 GRAPHICS/ SIGNS ARE ALSO CLASSIFIED (As per *National Building Code*)

1. Advertising Sign
2. Closed sign
3. Illuminated sign.
4. Ground Sign
5. Electric sign
6. Marquee Sign
7. Open Sign
8. Projecting Sign
9. Sky sign
10. Temporary sign
11. Verandah sign
12. Wall Sign

1. **Advertising Sign** - Any surface or structure with characters, letters or illustrations applied thereto and displayed in any manner whatsoever out of doors for purposes of advertising or to give information regarding or to attract the public to any place, person, public performance, article or merchandise whatsoever, and which surface or structure is attached to, forms part of or is connected with any building, or is fixed to a tree or to the ground or to any pole, screen, fence or hoarding or displayed in space.

2. Closed Sign – Any graphics or sign in which at least more than fifty percent of the area is solid or tightly enclosed or covered.

3. Illuminated Sign -Any sign, permanent or otherwise, the functioning of which depends upon its being illuminated by direct or indirect light, and other than an electric sign.

4. Ground Sign - Any sign detached from a building, and erected or painted on the ground or on any pole, screen, fence or hoarding and visible to the public.

5. Electric Sign – Any graphics or sign in which electric fittings, which are an integral part of the signs, are used.

6. Marquee Sign- Any sign attached to or hung from a marquee canopy or other covered structure projecting from and supported by the building and extending beyond the building wall, building line.

7. Open Sign – Any graphics or Sign in which at least fifty percent of the enclosed area is uncovered or open to the transmission of wind.

8. Projecting Sign- Any graphics affixed to any building element and projecting more than 30 cm there from.

9. Roof Sign –Any graphics erected or placed on or above the parapet or any portion of a roof of a building including signs painted on the roof of a building.

10. Sky Sign – Any sign advertising sign displayed in space like:

a) a gas filled balloon anchored to a point on the ground and afloat in the air with or without a streamer of cloth, etc; or

b) sky-writing, that is, a sign or word traced in the atmosphere by smoke discharged from an aeroplane.

11. Temporary Sign- Any sign, banner or other advertising device constructed of cloth, canvas, fabric or any other light material, with or without a structural frame, intended for a limited period of display; including decorative displays for holidays or public demonstrations.

12. Verandah Sign – Any sign attached to, posted on or hung from a verandah.

13. Wall Sign - An advertising sign, other than a projecting sign, which is directly attached to or painted or pasted on the exterior surface of or structural element of any building.

2.2 OTHER OUTDOOR FORMATS

1. Stadiums
2. Cinema Halls
3. Petrol Pumps
4. Air Balloons
5. Public utilities.

"Remove graphics, disable a person or firm from proclaiming its wares and their merits, and the whole of society and of the economy is transformed. The enemies of graphics are the enemies of freedom".

-John Enoch Powell

CHAPTER 3

LITERATURE REVIEW

There are certain requirements of outdoor graphics/ signs, as per National Building Code, with regard to public safety, structural safety and fire safety. These requirements include the role of authority, design of graphics etc. Some of them are listed below:

1. Permits for graphics
2. Maintenance and inspection
3. General requirements

3.1 PERMITS FOR GRAPHICS

3.1.1 CONDITIONS FOR GRANT OF PERMIT FOR GRAPHICS

For erecting, altered or maintained any graphics/ signs, as per National Building Code, there need a permission from the Authority that shall be subject to the following conditions:

a) The written permission shall not be granted or renewed at any one time, for a period exceeding three years from the date of grant of such permission or renewal.

b) The written permission or the renewal granted by the Authority shall become void:

- if any sign or the part thereof falls either through an accident or any other causes
- if any addition is made except for the purpose of making it secure under the direction of the Authority;
- If any change is made in the graphics/sign or part there of.

- if any addition or alteration is made to the building or structure upon or over which the sign is erected and if such addition or alteration involves disturbance of the sign or any part thereof; and

- If the building or structure upon or over which the sign is erected fixed or restrained becomes demolished or destroyed.

c) Light and ventilation of buildings, if any situated near the signs and hoardings shall not be obstructed in any way;

d) Advertisements displayed shall not be of any objectionable or obscene nature

e) In the public interest the Authority shall have the right to suspend the license even before the expiry period, upon which the license shall remove the signs.

f) The license shall be responsible for the observance of all the rules and regulations laid down by the Authority;

g) The signs should not destroy the aesthetic beauty of the locality;

h) The signs other than pertaining to building shall not be permitted to come in front of buildings such as hospitals, educational institutions, public offices, museums, buildings devoted to religious worship and buildings of national importance

i) Maintenance and inspection of advertising signs and their supports shall be inspected by the authority atleast once in every calendar year.

j) No hoarding sign on the highways shall be put without the permission of the Authority maintaining/ incharge of highways/ roads; and

3.1.2 APPLICATION FOR LICENCE OR PERMIT AND REQUIRED DRAWINGS

Every person- intending to erect, alter or display an advertising sign for which a permit or license is required, shall make application to the Authority on the prescribed form containing such particulars as the Authority may require. Such a form shall be signed by the applicant and by the owner of the site upon which such sign is or is to be situated and shall include the following information:

a) Full specifications showing the length, height and weight of the sign, the location where it is to be erected, the manufacturer's name and address and where applicable, the number of lights and electrical details of the same.

b) Such form shall be accompanied by a location plan indicating the position of the sign on the site drawn to a scale of I:500 and by full detail drawing drawn to a scale of 1:20 or an exact multiple thereof in ink or on prints including, if required by 'the Authority, an elevation showing the sign in relation to the facade.

c) In the case of roof signs, projecting signs or ground signs in addition to the foregoing, the size of all members of supporting frameworks and anchorages, and, if required by the Authority, the necessary design calculations shall ,be furnished with the application.

d) In the case of sky signs, necessary information as desired by the Authority may be supplied.

3.1.3 The Authority may, on the receipt of an application for permit, either sanction or refuse such a permit or sanction with modifications as deemed necessary and shall communicate decision to the applicant. If within 30 days of receiving an application for a permit the Authority fails to intimate in writing to the applicant, the permit along with the plans shall be deemed as sanctioned.

3.1.4 When a sign has to be altered, information only on such plans and statements, as may be necessary, shall be included in the form. However, the changing of movable harts of an approved sign that is designed for such changes

shall not be deemed an alteration provided the conditions of the original approval and the requirements of this Dart are not violated.

3.1.5 Existing Advertising Graphics - Advertising graphics/signs in existence at the date of promulgation of the Code and covered by a valid license or permit issued by the Authority shall not require to be licensed under the Code until such – License or permit has expired, provided it is maintained in a good and safe condition.

3.1.6 For advertising signs application shall be submitted through a structural engineer along with necessary drawings and structural calculations. The wind load taken in the design calculations shall be in accordance with Part IV Structural design, Section Loads.

3.1(B) EXEMPTIONS

1. No permit shall be required for signs and outdoor display structures of the following types:

a) If the signs are exhibited within the window of any building provided it does not affect light and ventilation of the building.

b) If it relates to the trade or business carried on within the land or building upon which such advertisement is exhibited or to any sale, entertainment or meeting or lettering of such land or building or any effects therein; or to the trade or business carried on by the owner of any omnibus or other vehicle upon which such graphics is exhibited.

2. In case of Store Sign non-illuminated graphics/signs erected over a show window or over the door of a store or business establishment which announce the name of the proprietor and the nature of the business conducted therein; the sign shall not be more than 1m in height.

3. The erection or maintenance of a sign designating the location of a transit line, a rail track, station or other public carrier when not more than 0.5 sq.mts. in area.

3.1(C) UNSAFE AND UNLAWFUL SIGNS

Notice for unsafe and unlawful signs-

When any sign becomes insecure, or in danger of falling, or otherwise unsafe, or if any sign shall be unlawfully installed, erected or maintained in violation of any of the provisions of the Code, the-owner thereof, or the person or firm maintaining the same, shall upon written notice of the Authority, forthwith in the case of immediate danger and in any case within not more than three days, make such sign conform to the provisions of this part or shall remove it. If within three days the order is not complied 'with, the Authority may remove such sign at the expense of the owner.

1. Notwithstanding the above, it shall be the responsibility of the owner to ensure the safety of the advertising signs, even without a reference from the Authority.

2. The following signs may not be permitted under any circumstances:

Any sign which in the opinion of the Authority is an obscene, repulsive, revolting, or objectionable character or injurious effect on public or any particular class of persons, or is displayed in such a place, in such a manner or by any such means as, in the opinion of the Authority, could be likely to affect injuriously ihe amenities of, or to disfigure shy neighbourhood.

3.2 MAINTAINENCE AND INSPECTION

3.2.1 Maintenance - All signs for which a permit is required, together with all their supports, braces, guys and anchors shall be kept in good repair, both structurally and aesthetically, and when not galvanized or constructed of approved corrosion-resistive non-combustible materials, shall be painted when necessary to prevent corrosion.

3.2.2 Housekeeping - It shall be the duty and responsibility of the owner of every sign to maintain the immediate premises occupied by the sign, in a clean, sanitary and healthy condition.

3.2.3 Inspection - Every sign for which a permit has been issued and every existing sign for which a permit is required shall be inspected by the Authority at least once in every calendar year.

3.3 GENERAL REQUIREMENTS:

3.3.1 Loads --- Every advertising sign shall be designed so as to withstand safely the wind, dead, seismic and other loads.

3.3.2 Illumination - No sign shall be illuminated by other than electrical means and electrical devices and wiring shall be installed in accordance with the requirements of Part VIII Building services, Section 2 Electrical installations. In no case shall any open spark or flame be used for display purposes unless specifically approved by the Authority.

3.3.3 Location of Advertising Signs

a) No advertising signs shall be erected, constructed and maintained so as to obstruct any pedestrian movement or fire escape or any window or door, or opening used as a means for egress or for fire fighting purposes or so as to prevent free passage from one part of a roof to any other part thereof.

b) No sign shall be erected in any form or shape or manner which will interfere with any opening required for lighting and ventilation.

3.3.4 Use of Combustibles

a) Ornamental features-Wood or plastic or other materials of combustible characteristics similar to wood may be used for mouldings, capping, nailing blocks, letters and latticing where permitted and for other purely ornamental features of signs.

b) Sign facing -Sign facings may be made of approved combustible materials provided the area of each face is not more than 10m' and the wiring for electric lighting is entirely enclosed in metal conduit and installed with a clearance of not less than 5 cm from the facing material.

3.3.5 Damage or Defacement by Removal of Advertising Signs: Whenever any
Graphics/ sign is removed, whether in consequence of a notice or order under the Code or otherwise, any damage or defacement to the building or site on or from which such sign was displayed, shall be made good to the satisfaction of the Authority.

3.3.6 Alteration to Ground Level: Whenever any alteration is made to the ground level adjacent to any graphics/ sign, the owner of the site on which sign is erected. shall be responsible for the alteration of the height of such graphics/ sign so as to conform to the requirements of this part.

3.3.7 Traffic Control Interference

a) No advertising sign shall be erected or maintained which interferes with or is likely to interfere with any sign or signal for the control of traffic.

b) No graphics/ sign shall be placed particularly in bends and curves so as to obstruct the view of traffic at intersecting streets.

3.3.8 Draining of Signs: Adequate provision for drainage shall be made in every graphics/ sign, where the possibility of collection of moisture exists.

3.3.9 Glass in Signs: All glass used in graphics/ signs, other than glass tubing used in gas discharge or similar signs shall be of safety glass conforming to accepted standards of at least 3mm thick. Glass panels in advertising graphics/ signs shall not exceed 6.0 sq.mts. in area, each panel being securely fixed in the body of the sign independently of all other panels. Glass signs shall be properly protected from the possibility of damage by falling objects by the provisions of suitable protecting metal canopies, or by other approved means. Use of glass may be discouraged or avoided wherever possible for signs placed overhead.

6. I0 Interference to Fire Hydrants – Graphics / signs shall be so placed as not to obstruct the use of the hydrants or other fire fighting appliances.

3.3.11 Serving Devices: Ladders, platforms, rings and all other devices for the use of servicing personal shall have safety devices and suitable design loadings.

3.3.12 Animated Devices: Signs which contain moving section or ornaments shall have fail-safe provisions to prevent the section of ornaments from releasing and falling or shifting its centre of gravity more than 45 cm. The fail-safe device shall be in addition to the mechanism and its housing which operate the movable section or ornament. The fail-safe device shall be capable of supporting the full dead weight of the section or ornament when moving mechanism releases.

"Perception is the use of memory to make sense of phenomena."

- Smith

CHAPTER 4

FACTORS AFFECTING PERCEPTION

4.1 HUMAN FACTORS

There are number of viewers on the street that respond to the street graphics. Each viewer's perception and response to graphics are conditioned by certain physical and psychological factors .These factors are referred to as *human factors.*

4.1.1 PHYSICAL FACTORS include

- Normal Field of Vision
- Reading Rate
- Legibility
- Eye Level
- Letter Heights

1. NORMAL FIELD OF VISION

Studies indicate that the normal field or cone of vision suitable for signing covers an angle of about 60°. Areas outside the angle tend to be seen in much less detail. While it is true that this field of vision can be greatly enlarged by turning the head or tilting the head, the average viewer resists this extra effort.

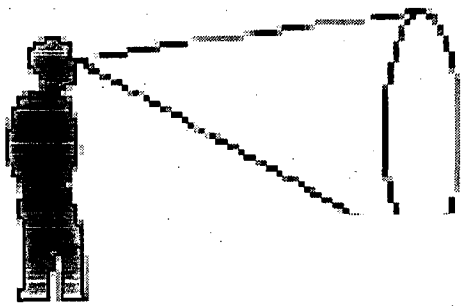


Figure 4.1 position sign for maximum visibility
Image source: Frutiger, Adrian – Signs and Symbols

For example, if a sign were supported from a high ceiling so that a sight line between the viewer's eye and the horizontal were more than 30°, it would probably be overlooked. Normally, viewers are not in the habit of tilting their heads to look at a sign, nor will they make any unusual head motions in order to see a sign which is not within their normal field of vision. Consistency in the height of signs in a system reduces the viewer's need to look many places for information.

2. READING RATE

Among the normal reading public there is a wide variation in individual reading rates from perhaps 125 words per minute to 500 or 600. Factors like age, intelligence, and education influence reading rates; the average is about 250 words per minute. Considering this reading rate, vehicular signs, which may be seen for only a few seconds, should include no more than six short items.

3. LEGIBILITY

Distance studies indicate that under normal daylight when standing still a person with normal vision can read 1-inch (25-mm) high letters from a distance of 50 feet (15 meters). However, this approach must be modified for sign design legibility. For aging driver, the distance reduces to 40 ft (12.1 m) per inch of letter height.

4. EYE LEVEL

The average height of a viewer's eye level, measured from the ground when the viewer is standing, is about 5 feet, 6 inches (1.7 meters); when sitting, it is about 4 feet, 3 inches (1.3 meters); when driving an auto, it is about 4 feet, 6 inches (1.4 meters). The eye level of a viewer driving a large truck is much higher than that of auto drivers and should be verified for each specialized vehicle where relevant to the design problem.

5. LETTER HEIGHTS

Letter heights for vehicle oriented signs involves additional factors

- speed of the vehicle and
- the time it takes to recognize and read the sign.

To meet broad public needs i.e. meeting needs of aging and physically disabled people, a letter height of 1-inch for 25 feet (7.5 meters) of viewing distance, is a more practical guide for pedestrian signs.

4.1.2 PSYCHOLOGICAL FACTORS include:

- Figure-Ground Relationship
- Implications of Color

1. FIGURE-GROUND RELATIONSHIP

Psychologists refer to figure ground relationships when they talk about how shapes or patterns are perceived against a background.

"Shapes are delineated by edges and edges are contours in perception". Anything which affects a clear perception of the contours may affect recognition of the object.

- Smith

Figure-ground concepts also relate to how the negative spaces between letters affect perception and recognition of letters and words. In learning to read we organize letters into words, learning to distinguish an entire word by its shape. Psychologists call this "perceptual filling in" or "figural organization." If letters are crowded together so that they touch or are letter spaced excessively, the negative spaces may be affected to the point where recognition of the word as a whole is destroyed.

Dark bronze letters mounted on a rough stone wall present an example of figure-ground problems. In bright sunlight, these letters cast shadows nearly as dark as the letters. Recognition of the letter forms is reduced or destroyed because perception of letter is blurred by the shadows. It follows that light colored letters on a dark background are less affected by

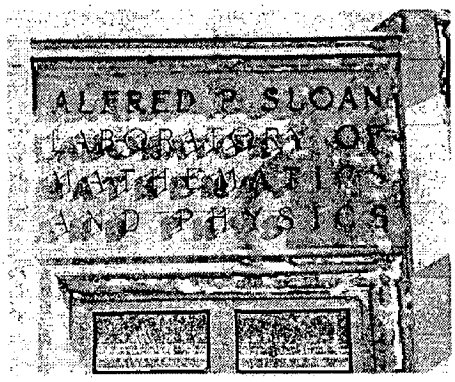


Figure 4.2 Dark brown letters mounted on wall
Image source: Signs and Symbols

2. IMPLICATIONS OF COLOR

Individuals seem to vary considerably in their ability to distinguish and remember colors. Probably only six different colors, not including white and black-red, yellow, blue, green, orange, brown-can be readily distinguished and remembered by normal viewers. Despite these limitations, color can be used as a secondary identification element or as a coding device in situations where the number of colors is very limited.

For example, colors are used on painted columns or walls in a parking garage to help identify the different levels. This coding application does not require color memory when reinforced by numbers or letters. Color can evoke particular moods or feelings; this positive quality of color is widely used in wall graphics,

Certain colors can be powerful reinforcing agents in signing; the viewer has been conditioned to associate red, for example, with danger or emergency because of experience with fire engines, flashing red lights, or traffic signals. Used as the background of a street stop sign, the color red reinforces but could not function alone in place of the "stop." Similarly, we respond to yellow as warning color, probably because we have seen it used in traffic signals and construction signs for so many years. Certain applications of colors produce visual phenomena which can be exciting when applied to art or graphics, but troublesome when applied to signing. When two complementary colors of equal chroma are used together, as in the case of letters and background, a displeasing vibration can occur.

4.2 OTHER FACTORS

Along with human factors, there are other factor also that affects the perception towards graphics which include

1. Visual appropriateness of graphics
2. Human perception
3. Speed of vehicle from which a graphics is perceived.

4.2.1 VISUAL APPROPRIATENESS OF GRAPHICS

Appropriateness is important because it strongly affects the interpretations people put on the graphics: whether designers want them to or not, people will interpret graphics as having meanings. When these meanings support responsiveness, the graphics has a quality we call visual appropriateness.

- **When is this important?**

Visual appropriateness of graphics is particularly important in the places which are most likely to be frequented by people from a wide variety *of* different backgounds; particularly when the graphics appearance cannot be altered by the observers themselves. Both indoors and out, therefore, visual appropriateness is mostly important in the more public spaces of the scheme. So far as public outdoor space is concerned, it is particularly relevant *to* the outside of the buildings which define the public realm.

- **What makes the visuals appropriate?**

The interpretation people give *to* the graphics can reinforce its responsiveness at three different levels:

- by supporting its legibility, in terms of form and use.
- by supporting its variety.
- by supporting its robustness, at both large and small scales.

One must designed the graphics/signs to reinforce the legibility *of* the area in which it is erected. The detailed appearance must be designed to reinforce this objective. For example, if the signage is intended to be visually integrated into its surroundings, it is important that users should interpret its detailed design as having a family resemblance to the buildings around it.

4.2.2 HUMAN PERCEPTION

The term 'perception' is used in the environmental design literature differently to the way in which it is used in psychology – it seems to be used in the sense of how things are "seen".

-Rapoport

The occurrence of street graphics affects the perceived image of a city. In experiencing a city, the visual perception as one move through the city becomes very important. This gives the subject the foremost clues about what the city is all about.

Cullen talks about the importance of the visual impact of a city on those who live in it or visit. According to him the 'dramatic event in the environment' is created by the 'art of relationship' of 'buildings, trees, water, traffic, advertisements and so on'. The 'faculty of right' advertisement and so on. The 'faculty of right' is the most important for apprehending the environment. 'Vision is not only useful but it invokes our memories and experiences, those responsive emotions inside us which have the power to disturb the mind when aroused.' He also speaks about 'serial vision', which helps in experiencing the city as one moves.

The importance of perception is implicit in the very notion of urban design – from Camillo Sitte to the English townscape group. It is the difference between planning and design, between the coloured map and the experience of urban environment.

-Rapoport

Human perception is affected by the speed of movement. 'For example it can be predicted that pedestrians and motorists will differ greatly in the way they perceive the city. Perception of the city is sequential and the city is experienced in time.

Perception is dynamic and sequential. It is made up of short scans, involving the integration of successive partial views, but these are only meaningful if there are noticeable changes in successive views and some uncertainty as to the next

view. This integration of partial views is affected by speed and more generally by the rate of noticeable differences.'

'This suggests that for different speeds, different cues and different levels of complexity should be designed. Long pedestrian underpasses with white, shiny tiled walls are much too long and featureless at pedestrian speeds; the apparent rate of progress is reduced by the lack of noticeable differences and adequate levels of information. The roadside strip, at driving speeds, is too complex and chaotic, while residential streets seen at slower driving speeds or at pedestrian speeds are too monotonous: there is a reversal of needed levels of complexity related to speed.

There are also numbers of environmental factors which may affect how the viewer perceives a specific sign. The most important of these have to do with the quality, intensity, and colour of ambient light falling on the sign; the physical obstructions of sight lines between the viewer and signs; and the visual environment behind or around signs.

4.2.3 SPEED

The perception of complexity is thus related to the number of noticeable differences per unit time and hence to speed. Speed also influences the way people organize discrete stimuli into groups.

Movement perception along a road is within a structural order of constant elements- the road, the sky, lamppost spacing and yellow stripes. A person can oust himself too, this while the rest just happens! Lynch found out that more than half the objects sighted along the road by both the passenger and the driver are seen straight ahead and narrowly towards the sides as if with blinders. "THAT IS WHY SIGNS MUST BE ALONG THE ROAD". About one third of the attention is of the attention is off to the immediate sides. Attention is also more focused on 'moving objects' than 'stable' ones, except when the observer passes a visual barrier and in order to orient him, surveys the new landscape.

Speed the determinant of focal angle, both for the driver and the passenger. Increase of speed, narrow the focal angle with a resulting shift from detail to generally, attention shifts to points of decision. The body sensations of speed are few in a car. We depend upon vision for our perception of speed. Objects that pass overhead greatly increases the sense of speed. A tussle to come as close a possible to the road.

4.2.3.1 MEANING OF SPEED

The rate of displacement, rate at which we move quickness, velocity, swiftness, rapidity. Visual perception depends on the tremendous number of factors and complexities, yet one of the major ones happens to be speed.
For any information to get registered into our mental being, we need a certain exposure. Some can register instantaneously while others need a longer duration. If the interval is reduced, less the intake and more the generality. Thus what we see when we move has a great deal to do with speed at which we are moving, the medium. The amount that one registered is fixed depending on each individual's capabilities and potentials, but when speed increases the level of detail begins to drop and one cannot recapitulate exactly what he had seen.

Relevance of speed is beyond a shadow of doubt. It dictates the size of the boards for the required impact, in the process of which the information is communicated without any loss of detail. To stand out from the vast sea of generality, bold and erect.

4.2.3.2 VARIANCE OF SPEED

1. SUPER HIGH-SPEED MOVEMENT

Higher the speed lower the interval of exposure, narrow the focal angle hence simply big and large boards. Expressways, highways approaching the city, flyovers all facilitate traffic to move at very high speeds, also carry high intensity of traffic hence a major potential. To be able to communicate at that speed, where one would have only a split second to get noticed, would demand large

size hoardings. Function of the link is just that of a connector hence the type of hoarding seen would be more of the UNIVERSAL TYPE.

At high speeds elements are grouped into simple chunks, while at slow speed more discrete elements are perceived. High speed makes a complex environment too chaotic; a simple environment interesting at high speed becomes monotonous at slow speeds.

There are also effects of peripheral vision at high speeds. Central vision is essential for fine detail and small differences in contrast and colour, while peripheral vision detects monument. Hence the presence of elements close to a rapidly moving observer, particularly if these elements are complex, can be most distressing by greatly exaggerating apparent speed.

As speed increases, the task becomes more demanding and concentration increases. Several other things also happen.

- The point of concentration (or focus) recedes from 600 ft at 25 mph to 2000 ft at 65 mph. As a result elements must become larger. Also while objects perpendicular to the road become prominent those parallel to it lose prominence.

- Peripheral vision diminishes so that while at 25 mph the horizontal angle is 100^{o} it reduces to less that 40^{o} at 60 mph. One result is "tunnel vision" which may induce hypnosis and sleep. Side elements need to be quiet and subdued and perceived semi-consciously in the blurred field of peripheral vision, with the main features on the axis of vision and the point of concentration periodically moved laterally to maintain attention.

- Foreground detail begins to fade, due to the rapid movement of close objects. The earliest point of clear view recedes from 30 ft at 40 mph to 110 ft at 60 mph. At the same time detail beyond 1400 ft cannot be seen, as it is too small, so that the range is between 110-1400 ft and that is traversed in 15 seconds. Elaborate detail is than both useless and undesirable.

- Space perception becomes impaired so that near objects are seen, get close and disappear very quickly. They thus tend to 'loom', which is extremely stressful and elements too close to the edge or overhead, and sudden curves should be avoided.

2. MEDIUM SPEED MOVEMENT

On further reduction of speed, one experiences a greater flexibility to pace out one's speed, yet cannot exercise complete freedom to stop at will. One is still within a system and one must move on. Hence a considerable increase in the interval of exposure, hence a high degree of detail can be read. A reduction in the size of hoardings and overall form and format. More to stand out from the rest, but presence to be felt in the near proximity.

3. EXTREMELY SLOW MOVEMENT

Virtually every individual has complete freedom over one's rate of movement. He can stop at will and takes as much time, no compulsion to keep on moving. Resultant he has all the time to observe as when he feels the necessity or attracted by something of his liking. Thus just a simple NAMEPLATE informing the customer of the nature of the goods available is enough, and at the same time be flashy enough to attract ones attention.

4.2.3.3 PHYSICAL MANIFESTATION OF SPEED

The physical elements are the hoardings but another physical element, which can affect our meaning, is our rate of displacement- SPEED. The quicker we move, shorter is the interval of exposure, hence lesser is the time interval during which the graphic stimuli's presence can be felt. Thus with varied speeds the influence would vary and hence the information communicated.

Areas used at slow speed on foot or in slow vehicles should be designed differently to those designed for high speeds. While residential neighborhood should be simple with large-scale more widely spaced elements.

Urban signages form the facade or edge of the street. Similar to levels of complexity to be attained for different speeds by built masses, the speed of motion also affects the perceptible levels of complexity of the signages. Thus a pedestrian orientated commercial street may seem to be 'cluttered' by signages to motorist, whereas a fairly complex drive with hoardings at regular intervals may seem monotonous to the pedestrian.

All activities have their own speed of movement, conducive for the particular activity. Variety in activity gives rise to variety in speed. Hence when so much of a variety is in built, then to communicate there has to be an equal amount of variation, resulting in variance in size of hoardings, dimensions, height, colour, all telling the hoarding,' the intensity with which it should shout.....! so that it can be noticed, recollected and makes a dent in our mental being, at that particular speed of perception. Speed affects the size as well as various other factors connected with speed. The perception of color and texture are also directly related to speed. The scale of boards is also a direct consequence of speed.

"Graphics is the genie which is transforming areas into a place of comfort, luxury and ease for millions".

William Allen White

CHAPTER 5

GRAPHICS AND BUILT ENVIRONMENT

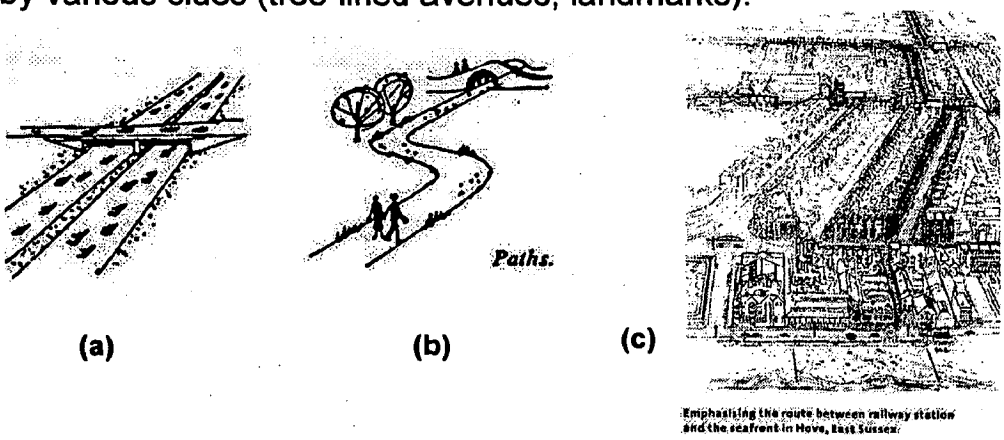
5.1 LEGIBILITY OF A PLACE

Legibility can be defined as ". . . the ease with which its parts may be recognized and can be organised into a coherent pattern..." Therefore a successful and legible development is something that has a clear image and is easy to understand.

Kevin Lynch, an American planner, was interested in how people understand the structure of cities and how they use them. There were two basic questions –what do they notice and to what extent in the structuring to people does it depend on the environment. This concern was almost exclusively with imageability – the clarity and ease with which people form urban image..

Lynch attempted to identify some of the features of the townscape which contribute tot the ability to form and accurate image of it. He identified five physical features which play a key role in creating legible areas.

1. **Paths** – The channels of movement: alleys; streets; motorways; railways. Paths are the channels along which the observer moves ... People observe the city while moving through it and along these paths the other environmental elements are arranged and related. Path has a directional quality. It can be defined by various clues (tree-lined avenues, landmarks).



(a) (b) (c)

Figure 5.1 a, b, c Paths; *Image source*: www.makingbetterplaces.org.uk

2. **Edges-** Edges are the linear elements which are not paths (rivers, elevated motorways, graphics line along road, walls of buildings. Such edges are directional in nature. Edges may be barriers, more or less penetrable, which close one region off from another; or they may be seams, lines along which two regions are related and joined together. Legibility can be improved through detailing and quality of materials.

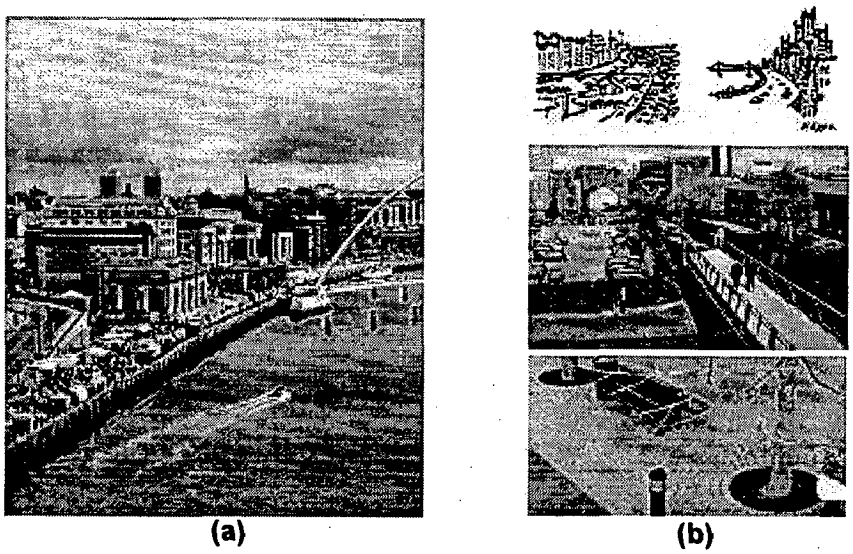


Figure 5.2 a, b Edges; *Image source*: www.makingbetterplaces.org.uk

3. **Districts** – Sections of the environment which have a distinct character which provides coherence, allowing the whole to be viewed as a single entity. Districts may be identifiable, for example, by the nature of the architecture of the buildings in the area or by their use.

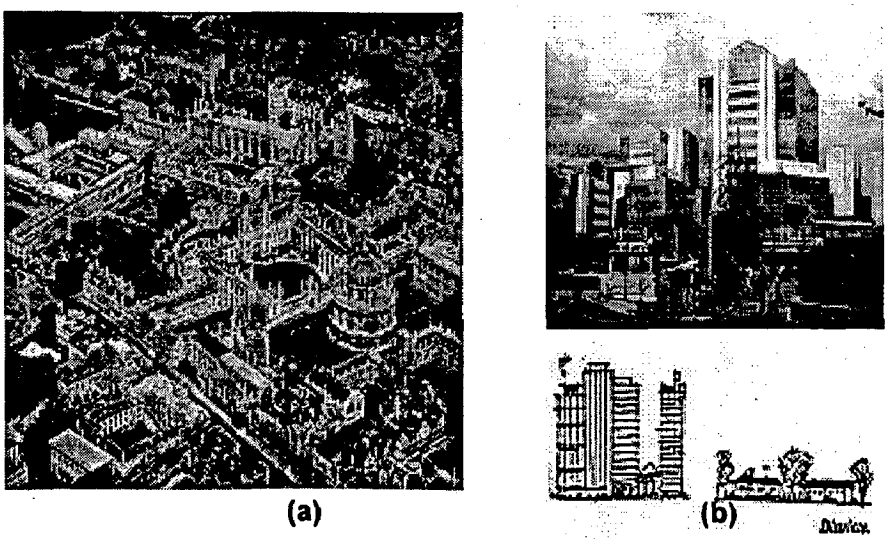


Figure 5.3 a, b Districts; *Image source*: www.makingbetterplaces.org.uk

4. **Nodes** – Important points of interest along paths, e.g. road junctions or town squares. Nodes are points, the strategic spots in a city, into which an observer can enter, and which are the intensive foci to and from which he is traveling

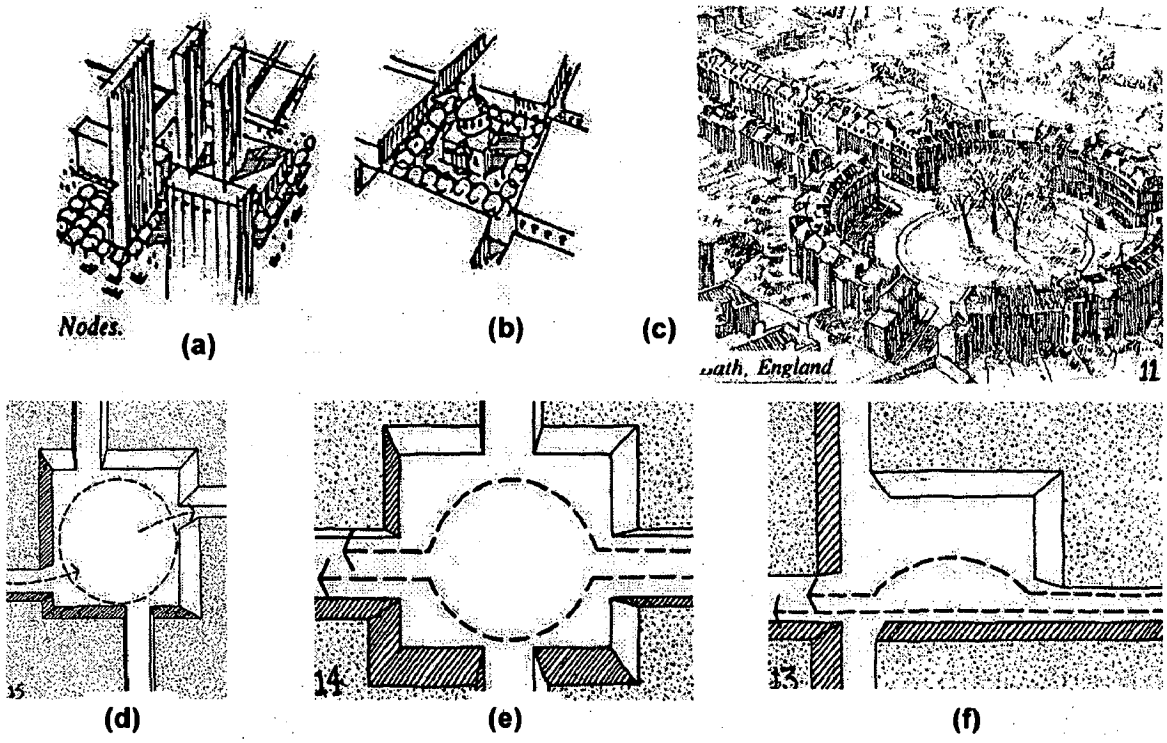


Figure 5.4 a, b, c, d, e, f Nodes; *Image source*: www.makingbetterplaces.org.uk

5. **Landmarks** – Static and recognizable objects which can be used to give a sense of location. Examples of landmarks might be prominent buildings or monuments or, on a smaller scale, recognizable shopfronts or a recognizable building graphics

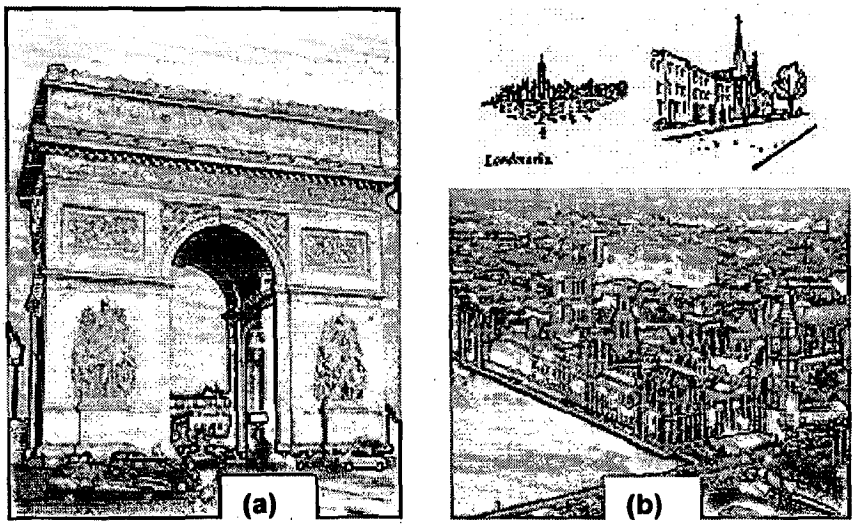


Figure 5.5 a, b Landmarks; *Image source*: www.makingbetterplaces.org.uk

Using these physical elements people are able to make accurate images of the city. Thus legibility is the quality by which the structure of a place is easily understood.

Legibility is important at two physical levels: physical form and activity patterns. Places may read at either level separately. For example, it is possible to develop a clear sense of the physical form of a place, perhaps enjoying it only at an aesthetic level. Equally, patterns of use may be grasped without much concern and with form. But to use a place's potential to the full, awareness of physical form and patterns of use must complement one another.

The legibility of both form and use is reduced in modern environments. This is easily seen by comparing the traditional city with its modern counterpart.'

Before the twentieth century, cities worked well in terms of legibility. Places that looked important were important, and places of public relevance could easily be identified. This was true of outdoor spaces and buildings alike.

The modern city is legible only in the sense that building cannot be: large office blocks, owned by pension funds and insurance companies, occupy key city centre's positions, expression the power of big financial institutions. But these bureaucratic enclaves – irrelevant to how most people use the city – visually overwhelm publicly – relevant places and facilities, confusing important activity patterns. This confusion is made worse because important public buildings and publicly – irrelevant private ones of the look alike.

- Responsive Environments

5.1.1 Reinforcing paths and nodes help in legibility. 'There are two objectives to be achieved in reinforcing path legibility.

- To give each path a strong character, easily distinguished by users.

- To bring out the relative importance of each path.

5.1.2 Reinforcing nodes depends on two main factors

- The functional roles of the linking streets.

- The level of public relevance of the activities in the adjacent buildings.

Marker sequence – additional intermediate markers other than the nodes in the path system help in guiding a person along the path.'

-Responsive Environments

The mental structuring of the various image elements creates legibility. Street graphics articulate these elements – the path, node, edge, landmark, districts or themselves act as image elements. They can affect the perceptible linearity of a path by their location on the edge of the path. They can increase the sense of linearity or decrease it. A hoarding can form an edge or series of signboards can come up n a built edge like a wall or a building façade as an edge. Often signages are landmarks for a locality. They can form character districts of their won in the way they come together.

5.2 IDENTITY OF A PLACE

Identity of a place can be defined as "A place having a character different from other areas"

A visual survey of almost every community shows enormous sameness, a same dullness that deadens the civic senses. And this condition will worsen. An observer doesn't find any difference whether he/she is in Mumbai or Delhi or any other metropolitan area. In case of commercial areas, uncoordinated graphics design creates such condition that all the areas look alike having no identity of its own.

In a present scenario, local community imagery will become more essential in order to provide a sense of place that the city dweller can cling to. But there is more here too: the need for imagery translates into an economic need because imagery means selling, and cities must always be aware of the need for selling. Buying and selling are basic to our lives. Cities complete for favour (talent, loyalty, money) even as do Corporation and individuals.

The need to create a favourable urban image has always existed. Kings built huge monuments to make visual their power. City-states erected extravagant symbols to attract trade and commerce. The bronze statue the 'Colossus of Rhodes' was one of the Seven Wonders of the World until destroyed by earthquake in 227 B.C. It could only have been built by a city seeking to express the grandeur of its harbour and thereby attract more commerce.'

Now with statistics showing that the average member of our mobile population changes residence every four years our cities – and our neighborhoods too – must face a struggle for distinction in order to retain and attract consumers (shoppers, industry, taxpayers). Many older, more conservative cities, particularly in the east, seem unaware of the intensity of this competition, their complacency being visually manifested by the deterioration of their brand image and their overall attractiveness.

For these who are aware of the economic value of a favourable image, the problem is not whether to have an image but rather what kind and how is it to the achieved.

A few cities have been blessed with natural features of exclusive character that endure and can be enhance though purposeful design.

It is not like that a place having natural feature can only create its identity but with the design talent, technology, and financial resources available today it is possible to construct an 'instant tradition' or a happening environment in any desired mode where before there was nothing.

Graphics can accentuate the existing, physical character of a place and create an identity. They can also create a character of their own in the way they come together and create a new identity, sometimes for accentuating the existing structure of the built form.

5.3 GRAPHICS AND BUILDING FACADES

Building facades are the means to give base to the graphics. In many instances it might be true that the graphics that are installed over the building façade are in direct conflict with the facade and built form, but it is also true that coordinated designed graphics add interest and creates identity to the otherwise mundane facade.

It is of no doubt; the graphics here has come up as a product of the internal functions of the building as well as due to its proximity to the main road. But because the architect has not provided proper options for the location of these graphics, they have come up all over the facade in a very haphazard manner. An advertiser will use any edge; any flat/blank wall space to advertise upon, and the higher the better. The element of the facade is massive ugly when signboards put haphazardly on different floors.

The architectural character of a street is an effort of each building of these streets to stay in harmony with the one next to it and very vitally, to still projects the statement is was designed for. If the facades are interesting enough and properly designed spaces are left for these graphics at the initial stage, the advertiser himself would hesitate to put up any graphics a top. But if the facades are not in harmony with each other the advertiser also does not hesitate in putting up graphics.

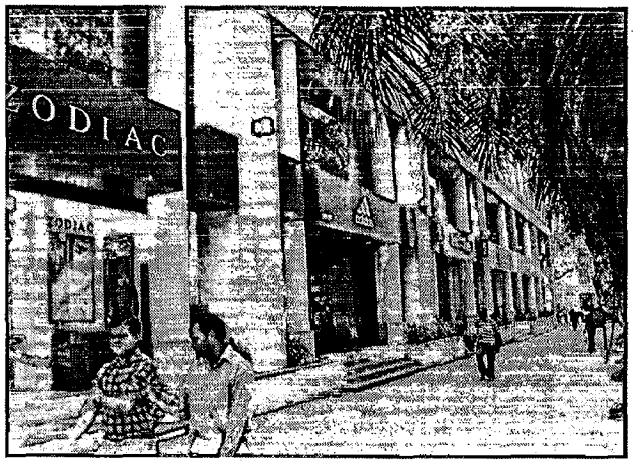


Figure 5.6 Hiranandani township, graphics in harmony with facade
Image source: author

5.4 SCALE

Scale is a ratio of building height to street width; a ratio of height of the human being to the building height, the ratio of his height to the open space, etc

All these ratios are the gauges of the comfort level of a human being. The scale of the building will define the boundary of its influence area on the urban setting, it is a part of .It is an entity totally dependent on the human perception, and if not flexible enough, it can be disrupted very easily.

The change of scale will also lead to that area's deterioration. Because once a person starts feeling uncomfortable in a space, his subconscious will automatically reject that space as an option to go, if he is given an alternative choice.
Scale plays a very important role in qualifying a place as comfortable to use. By nature man always tries to relate himself to his surroundings in order to ascertain

his position and feel secure. The feeling of security and comfort are essential in deciding the success of use of any surrounding. Narrow space enclosed by high edges creates a sense of claustrophobia whereas the lack of some enclosing element creates a lack of sense of orientation in space. A person does not feel related to his surroundings in this case.

These graphics has an ability to change the scale to a great extent. Chances are that if they continue to be just stucco elements, they might start disrupting the scale pf the spaces, the environment may prove to be looser.

When a person moves thorough the city it is through the variations in the perception of scale that the he relates himself to his surroundings.

"The quality of scale in buildings, constructions and trees is one of the most potent tools in the art of juxtaposition, and reference has already been made ... Scale is not size, it is the inherent claim to size that the construction makes to the eye. By and large the two go hand in hand, a big building does have a big scale and a small building a small scale. It is in the manipulation of the borderline that the designers' skill is called for."

- Cullen

The scale of a signage should be such that it should not seem visually incongruous in its setting or context.

"What you say in graphics is more important than how you say it".

David Ogilvy

CHAPTER 6

DESIGN PRINCIPLES AND STANDARD

6.1 PRINCIPLES OF STREET SIGNS

Shape and color coding are the means of distinguishing the main classes of message for the driver in motion.

Shape, seen first and should indicate the general class of message after that the driver in motion visualizes the color of panel. The particular message is seen last and the driver has been prepared for it by the shape/ color code. The choice of shape and color for each type of message is based on research

current usage, and an analysis of the problems of the present regulatory system. The principal need is to differentiate critical regulatory signs from all others (and from most signs in the urban environment).

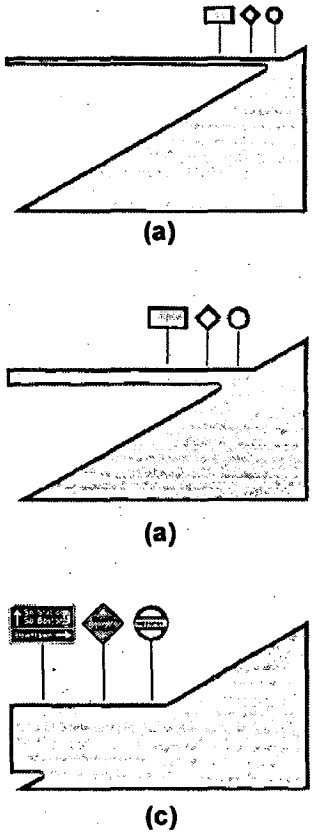


Figure 6.1 a, b, c Visualization of shape, colour & message,
Image source: City Signs and Lights

For maximum "target value" against diverse backgrounds, all signs are given reflectorized surfaces and borders of a contrasting color value: dark for light signs and light for dark colored signs.

In the order of visualization (what seen first), when the driver is in motion.

- **Shape of the panel**
- **Colour of the panel**
- **Message**

The visibility of specific sign, messages is determined by the choice of legend. While some types of messages are better conveyed by abstract symbols or pictures, most signs will require verbal messages: lettering is, a critical variable. Their legibility will be determined by the form and size of lettering.

6.1.1 SHAPE OF THE PANEL

Shape, seen first and should indicate the general class of message

Circle : Critical rules: stop, yield, turn etc

Rectangle: lane and curb usage, and speed regulation

Diamond : Warning

The shapes of signal panels are chosen, consciously or unconsciously, with regard to the intensity of their visual impression.

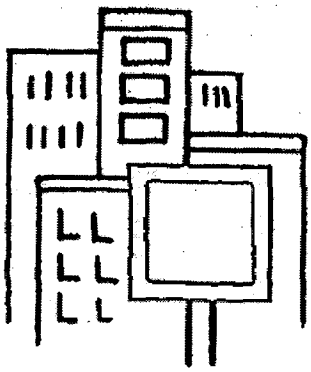


Figure 6.2 Square sign similar with modern townscape
Image source: Ballinger, Louise- Sign Symbol and Form

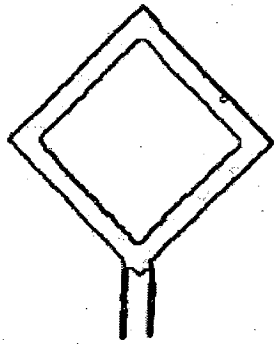


Figure 6.3 Diamond contrast with townscape
Image source: Ballinger, Louise- Sign Symbol and Form

Circular panels are the most clearly visible against their background whereas square or oblong shapes, on the other hand, tend to become submerged in the general townscape, which consists mainly of the same outward forms.

The circle and the oblique line provide a much stronger contrast to the urban environment. For this reason, most signal panels with a prohibitory content are given a striking shape, which may be in the form of a diamond or, as is most often the case, a triangle.

It is interesting to note that a triangle standing on its apex conveys, like the circular panel, a stronger impression of giving an order, whereas a triangle with its apex at the top more naturally carries a warning content. In the urban environment it is understandable that upside-down triangles produce a more aggressive form of expression than those with their apex at the top. One reason

for this effect is provided by the older form of townscape with its sloping roofs, ridged at the top

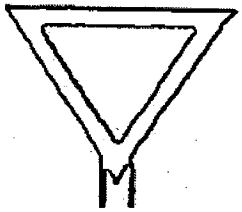


Figure 6.4 Triangular shape for prohibition signals
Image source: Ballinger, Louise- Sign Symbol and Form

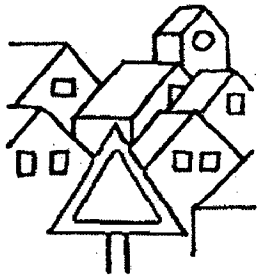


Figure 6.5 warning sign, resemblance with older townscape
Image source: Ballinger, Louise- Sign Symbol and Form

6.1.2 COLOUR OF THE PANEL

Individuals seem to vary considerably in their ability to distinguish and remember colors. On the street specific Color of sign board are used indicate the specific class of message. For eg. In case of traffic signs,

Black — regulation
Blue — road user services guidance, tourist information, and evacuation route
Brown — recreational and cultural interest area guidance
Fluorescent Yellow-Green — pedestrian warning, bicycle warning,
Green — indicated movements permitted, direction guidance
Orange — temporary traffic control
Red — stop or prohibition
White — regulation
Yellow — warning
Fluorescent Pink — incident management

The visibility of graphics/signs placed against different backgrounds was already investigated number of times in different laboratories. During investigation, test signs were flashed on the street scene for about 1 sec. to measure their visibility against different colored backgrounds. In this experiment, observers reported when they first saw signs while driving along an urban route.

1. Relative brightness and contrast, of sign-to-background and of legend-to-sign, are of primary importance for visibility and attention value.

2. Hue contrast can enhance the brightness effects, but color is most important and effective for transmitting coded meanings.

3. For best visibility, a sign should be darker against a bright day background, but brighter against a dark day or night background.

6.1.3 COLOUR AND SHAPE OF PANEL

Color and Shape of Panel combined should also used to indicate the specific class of message

- Red circle : Braking rules
- Green circle : Turning rules
- Blue rectangle : Local guidance
- Green rectangle : Distant guidance
- Yellow diamond : Warning

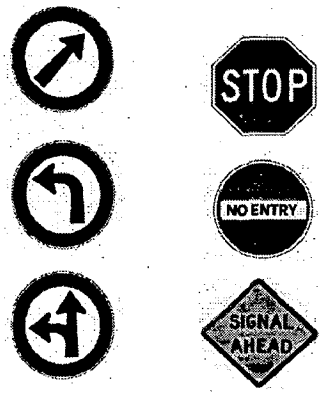


Figure 6.6 different shapes & colour used for traffic sign
Image source: Carr, Stephen - City Signs and Lights

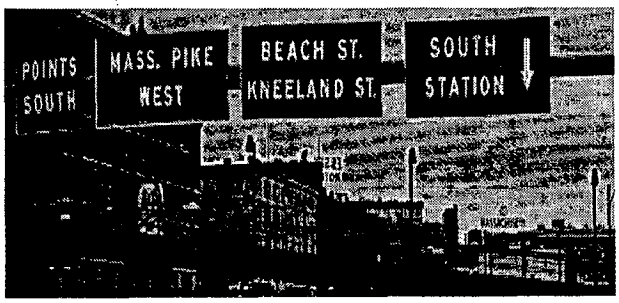


Figure 6.7 Different colour used for directional sign
Image source: Carr, Stephen - City Signs and Lights

6.2 STREET GRAPHICS STANDARD

CONTROLLING AGENCIES

The Manual on Uniform Traffic Control Devices (MUTCD), which contains all national design, application, and placement standards for street signs. All street signs nationwide must conform to the MUTCD.

In case of India, The National Highway Authority of India (NHAI) adopts the standards, the individual State and local highway agencies, select, install, operate, and maintain these street signs. For eg.

In **Delhi** there are three bodies responsible for regulating and controlling signs and symbols in Delhi. It is on their duty to oversee the proper implementation of these rules and controls. These are:

- Municipal Corporation of Delhi.
- New Delhi Municipal Committee.
- Cantonment Board.

Other than these the Railways auction out locations of hoardings and signboards. The land controlled by the Public Works Department does not allow any advertisements to be put up.

The Delhi Urban Arts Commission is an advising and approving agency for maintaining the urban form. This is done by approving street furniture installation, signs and symbols, new construction in respect to the street picture etc.

Following are some of the salient features of guidelines laid down by D.U.A.C.

1. No commercial sign boards shall be allowed by the local bodies or public agencies in the following areas:

a) Residential areas including the roads passing through these areas.

b) Near intersections or roundabouts.

c) In the vicinity of or on public buildings (railway stations, bus terminals, airports)

d) Central vista, entire bungalow area of Lutyens Delhi and the other area under the N.D.M.C.

e) Near or in front of parks and public gardens.

f) Riverfronts and ridge area.

g) Overhead and under bridges, water tanks and communication or transmission towers.

2. Signs/billboards and freestanding commercial signages of standardized sizes and specification may be permitted by the local bodies in the following areas:

a) Industrial areas.

b) On highways and roads beyond urbanizable limits.

c) Areas under wholesale store and trade.

d) Dumping areas.

e) Commercial areas.

3. In all other areas (not covered above) standardized graphics may be allowed by local bodies/ public agencies only with the prior approval of the D.U.A.C.

A general overview of the guidelines gives a feeling that all areas where the billboards are found to be in hoards are the same ones, which the D.U.A.C. prohibits. But then the question arises how come the billboards have managed to come up in these very areas. The answers are not very far to seek. Is it really practical, who is going to leave the most lucrative spots in town and the advertise in industrial areas. As far as permission goes, thanks to the many loopholes left in the guidelines the agencies are quite successful in getting required permission. If the permission is not forthcoming and the client insists on the specific site, the agencies put up the billboard and take a stay from the court.

The existing scenario in Delhi reflects the lack of coordinated policy or standards for the city as a whole. No attempt has been made by the authorities to study the impact of the graphics in those particular settings.

The street graphics are also a source of income for the city authorities. Hence the municipal corporation of Delhi gains considerable revenue from this source. The Municipal Corporation of Delhi operates in the old Delhi area. It levies tax on advertisements other than those published in newspapers under the provisions of section 142 and 143 of M.C. D act – all advertisements visible from a public street and a public place.

1. The M.C.D. prohibits the erection, display, exhibition of any advertisement, which injuriously affects the amenities of any historic public buildings or monument or of any public park or pleasure promenade.

2. No vehicle used for the purpose of advertisement shall display any advertisement in a manner, form or method different form that approved by the commissioner.

3. The assistant commissioner, in charge of advertisements, can grant or refuse permission for display of advertisement according to bye laws and any general or specific orders of the commissioner. Contents or the manner of its display is indecent or otherwise offensive to good taste or public of sentiment could also be grounds for disapproving of an advertisement.

4. By – laws for advertisement hoardings:

   - Shall not be more than 30 feet high from the ground level.

   - Shall not project, or be on or over the public way more than 6 inches beyond the general line of buildings in the street for which a regular line of street has been prescribed.
   - Shall not be within 30 yards from any public park or pleasure promenade.

- Shall not, in the opinion of the commissioner, be disproportionately large in comparison with the size of land or building on which they are displayed.

- Shall not be below 7 feet from the ground level.

The emphasis of M.C.D. for signs is on levying tax. The corporation approves putting off-premises hoarding in locations selected by them. These locations invariably are those wanted by advertisers because of vantage.

"There are many unjustifiable conclusions drawn from untenable arguments based upon unacceptable premises; the trouble is to find out which is which"

- Winston Churchill

CHAPTER 7

CASE STUDIES

Case studies are selected where the street graphics plays an important role in the urban visual scene. Primary case study has been done for the commercial streets of Delhi and Mumbai and secondary case examples have been chosen from abroad (Commercial Street of Boston).

Examples from outside the country show how efficiently public signs informs the people in the area where they were erected and how a little modification in traffic signs helps people in understanding these signs.

7.1 PARK SQUARE, BOSTON

Boston is the capital and largest city of the Commonwealth of Massachusetts. The city is located in Soffolk County Massachusetts, in the northeastern United States. The largest city in New England, Boston is considered the economic and cultural center of the entire New England region. The city, which had an estimated population of 590,763 in 2006, lies at the center of the Cambridge-Boston Quincy metropolitan area—the 11th-largest metropolitan area (5th largest CSA) in the U.S., with a population of 4.4 million.

7.1.1 CASE STUDIES 1(A): PARK SQUARE, BOSTON (for people on foot)

In Park Square, in the middle of downtown Boston, an experimental information center was, inaugurated. It was a full-scale working model, built to demonstrate and test a set of ideas for permanent centers.

At the center, cluster of brightly colored information kiosks topped by translucent plastic balloons were erected. Each kiosk served a different purpose and had its own type of information. Information was designed to be on call, easily available when and if someone wanted it, but otherwise unobtrusive.

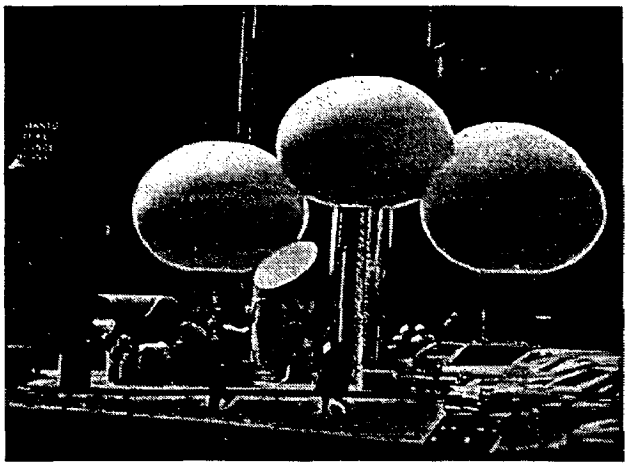


Figure 7.1 kiosks topped by translucent plastic balloons
Image source: City, sign and lights

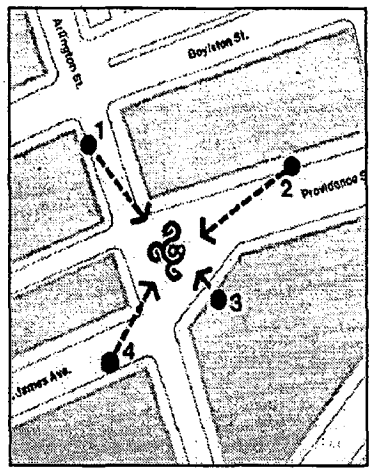


Figure 7.2 location plan for kiosks
Image source: City, sign and lights

These kiosks were erected near major junctions where several movement systems interlock, where people begin or end trips or transfer *from* one type of transportation to another. Here at junctions people can gather and is an ideal location to transmit information to people on *foot.*

Park Square is an important junction. There are *two* long-haul bus terminals (Trailways and Greyhound), an airline terminal, a major taxi rank and a subway stop (Arlington).

- **The center was designed to test three main hypotheses**:

1 Basic information on the city's activities, its physical structure, its history and culture can be presented in a manner that people will find both useful and engaging.

2 An information center can become a local forum for communications of all kinds and can itself stimulate people to talk with each other.

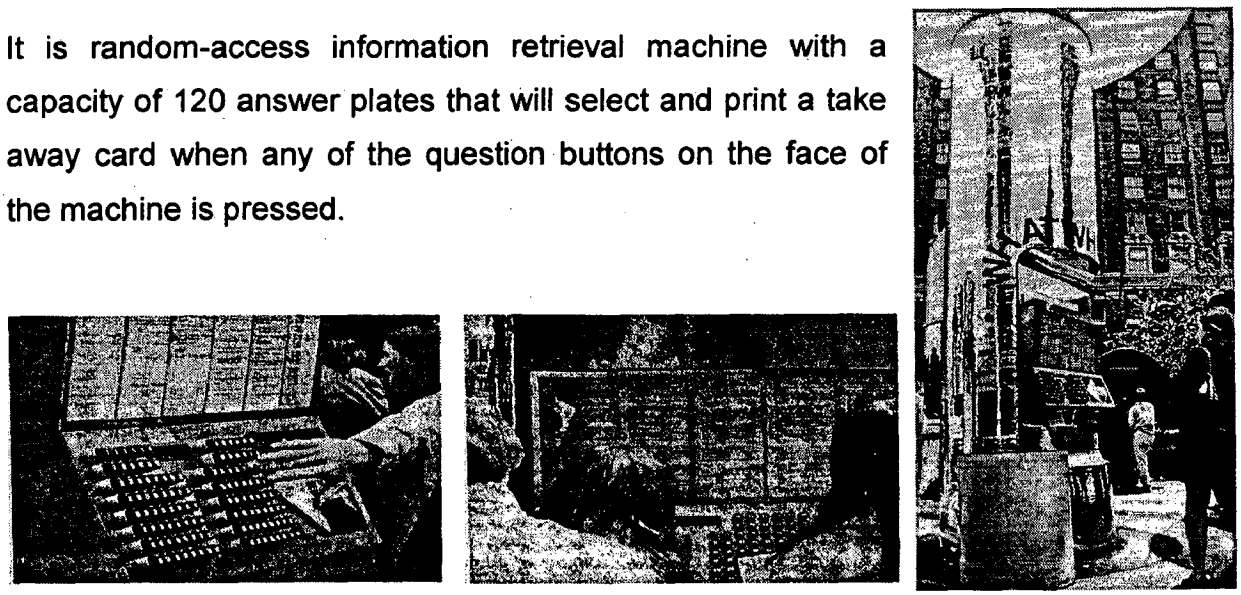
3 Information centers can be designed to evolve by means of feedback mechanisms which enable content more relevant to the needs and interests of the people.

These kiosks, presented detailed information on activities, includes

- ***Question / Answer machine (Directomat).***
- ***Talking Maps***
- ***Tele-Type Machine.***
- ***Entertainment***
- ***Movie Tube***

1. QUESTION / ANSWER MACHINE (Directomat)

It is random-access information retrieval machine with a capacity of 120 answer plates that will select and print a take away card when any of the question buttons on the face of the machine is pressed.



(a) (b) (c)

Figure 7.3 a, b c Question/ Answer machine kiosk: *Image source*: Carr, Stephen-City, sign and lights

Information includes:

- General orientation (Direction from park square)
- Fact of Boston's history and cultural information on public services
- Thing to do (suggested activities in Boston)
- Future plans for the city.

The question answer machine was the most popular display in the center. The number of times the buttons were pushed indicates the relative popularity.

Total no. of questions asked over 32 days: 84940

Average daily figure: 2654

- **Categories of questions listed in order of popularity:**

  1. General knowledge – question on sports, cultural, geographical and regional points of interest.
  2. Direction from park square.
  3. Boston history
  4. Suggested Activities.
  5. Associations, institution, agencies etc
  6. Directions to major destination and so on.

2. TALKING MAPS

The most convenient map of the city is one that one can carry with him. The available fold-up maps, which we carry with us, fail to give a sense of city form apart from street pattern.

For this reason isometric maps are better, they show the 3-D form of a city picking out key landmark realistically and indicating the general building and open space texture.

(a)

(b)

Figure 7.4 a, b c kiosk displaying isometric maps: *Image source*: Carr, Stephen - City, sign and lights

Maps such as these are spread through out the center at junctions, rapid, public building etc. These maps refer the viewer to nearest information center. The maps itself had an audio system describing city event of the day on the punch of the button.

3. TELE- TYPE MACHINE

News print-out was eject from UPI Tele-type machine into a basket and could be torn out and taken away.

(a) (b)

Figure 7.5 a, b Tele type machine installed in kiosk; *source*: Carr, Stephen - City, sign and lights

A special telephone is also connected with this machine so as to connect people to appropriate source for answer to direct question like about present condition.

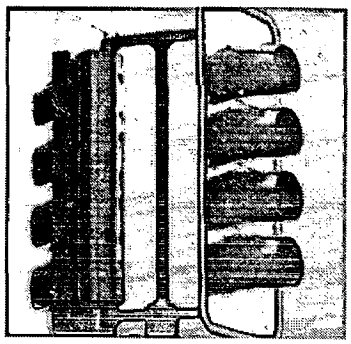
People seemed to want these scraps of news. As one observer said "The users don't have to go and buy a news paper. They can just read and know what's happening"

7.1.2 CASE STUDIES 1(B): PARK SQUARE, BOSTON (for people on vehicles)

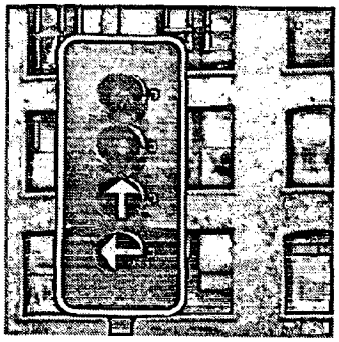
An experimental component of information systems for people in vehicles were installed in Dewey Square and Park Square, two complicated and confusing traffic areas in downtown Boston. The demonstrations included guidance and traffic control signs, as well as modifications to traffic signal units.

1. SIGNAL LIGHTS

Signal Lights are probably the most effective traffic control devices. Recognition of signal lights, and particularly of turn arrows, can be difficult against a cluttered background of private signs and urban form.



(a)



(b)

Figure 7.6 a, b Existing signal light unit in Boston
Image source: Carr, Stephen -City, sign and lights

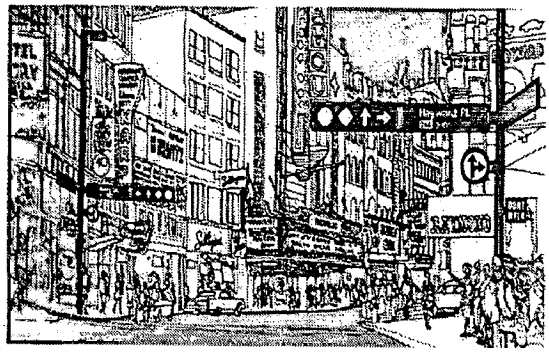


Figure 7.7 Proposed signal light unit
Image source: Carr, Stephen -City, sign & lights

The driver's visual task at intersections would be considerably simplified if regulatory and street name signs were combined with signal units or attached to the same pole.

The horizontal unit (shown in fig 7.7), developed as a demonstration unit, as a coordinated regulatory, street name and light pole unit.

This unit gets the signals closer to the center of the driver's field of view. Turn arrows are larger. It provides a visually-dominant location for street name signs.

2. BRAKING SIGNS

The current regulatory sign system does not consistently identify required braking actions:

- *STOP* sign is in white lettering on a red octagon;
- *DO NOT ENTER* ,in black lettering on a white rectangle;
- *YIELD* is in black letters on a yellow triangle.

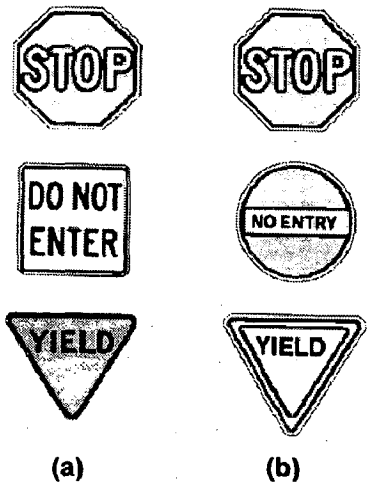


Figure 7.8 a, b Different form & colour used for braking action
Source: City, sign and lights

Figure 7.9 Proposed sign for braking action
Source: City, sign and lights

But these three signs are in the same category and should be so identified.
Red is firmly established as the color cue for both the stop light and the stop sign, "DO NOT ENTER" and "YIELD" should be similarly coded. The three signs should also have related shapes.

The British system uses the red color coding, but its use of both a triangle and circle for the STOP sign seems unnecessarily complicated.

A more consistent solution would be to adopt the circle foi all three signs, in accord with the signal light.

YIELD, in this system given a white border, since it requires a braking but not a full-stop response.

Thus, any red circle requires a braking action to a greater or lesser degree. This is a very simple rule.

3. TURNING SIGN

Rules which require turning actions also follow no consistent system in current standard signs. Signs have black legends on a white background, but they may be square or rectangular and they vary in size and legend. Some messages are negative (NO LEFT TURN); some are positive (KEEP RIGHT) etc.

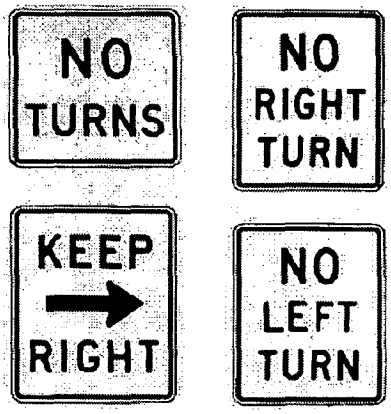


Figure 7.10 Turning sign
Image source: wikipedia.org

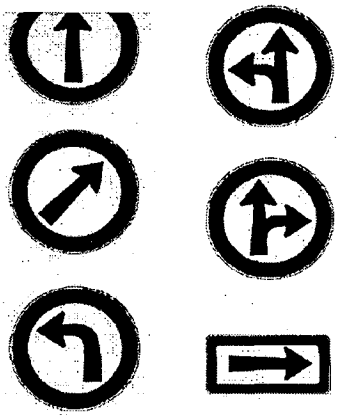


Figure 7.11 Proposed sign for turning
Image source: City, sign and lights

In this experimental demonstration this simple, legible way, as shown in fig.7.11, is developed to present the complicated turning rules that occur so frequently in city areas. The system is also economical, since it reduces the number of different signs to a minimum.

4. COMPLEX INTERSECTIONS

Intersections are the most important decision making points. At its simplest, the guide system show street names, and the next destination points.

At complicated intersections- such as Dewey Square in the demonstrations - Here, where there were multiple intersections, not all at right angles, **advance map diagrams** of the situation were installed. Such diagrams are helpful.

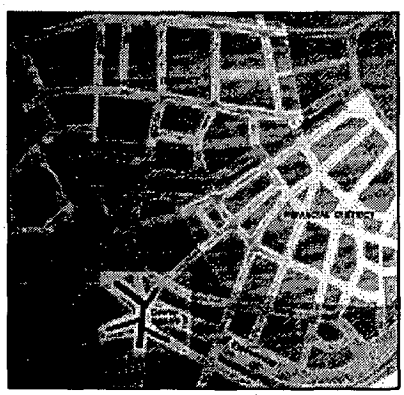


Figure 7.12 location plan
Image source: City, sign and lights

Unlike ordinary stack signs which can only deal with simple right angle crossings, **advance map diagrams** can give a complete picture of an intersection.

These **advance map diagrams** can show the relative importance of each road that may be entered (by making it narrow or wide) and indicate roads which cannot be entered (by no-entry symbols). Its real effectiveness depends on individual capabilities *for* reading plan diagrams, and about the interactions between driver, sign etc

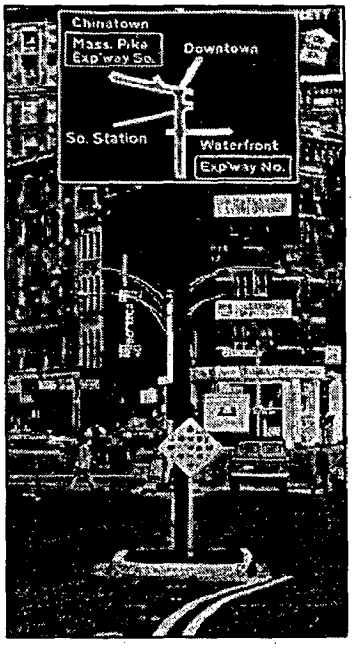


Figure 7.13 Advance map at intersection
Image source: City, sign and lights

7.2 MUMBAI

Mumbai is the capital of the Indian state of Maharashtra. With an estimated population of thirteen million, it is the second most populous city in the world. Along with the neighbouring suburbs of Navi-Mumbai and Thane, it forms, at nineteen million, the world's fifth most populous metropolitan area.

Mumbai is the commercial and entertainment center of India, accounting for 25 per cent of industrial output and seventy per cent of capital transactions to India's economy. With the recent trend of globalization, our country has adopted a policy of liberalization whereby the multinational companies are allowed to carry on business in the country. Besides this whole trend of consumerism which took place in the west cities is catching up now in the country. The metropolises are the places which the producers target to introduce their products, and economy is controlled by the changing policies of the centre.

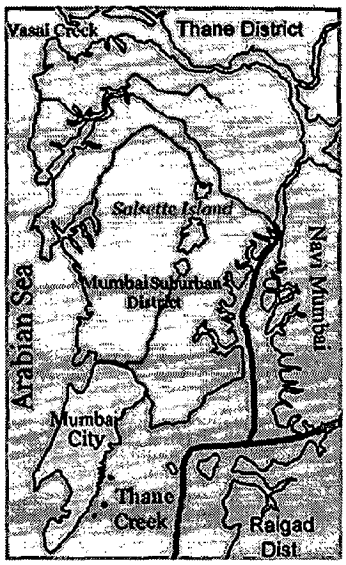


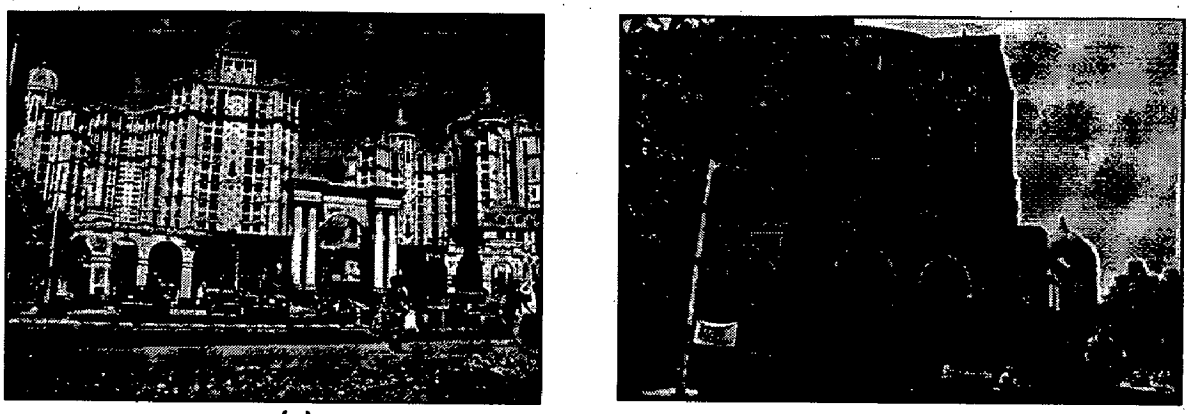
Figure 7.14 Map of Mumbai
Image source: wikipedia.org

Being commercial and entertainment centre of India facing a challenge of a boom in the phenomena of graphics, which is affecting the urban visual scene today. Hence a study of how they are happening and in what aspects affecting the urban setting is important here. One can then take necessary design decisions towards the objective.

7.2 *CASE STUDIES 3:* HIRANANDANI GARDEN TOWNSHIP, POWAI, MUMBAI

Hiranandani Gardens is a township located in Powai, a northern suburb of Mumbai. The township is approachable by Adi-Shankaracharya Marg. The nearest Mumbai Suburban Railway station is **Vikhroli**

The township is dotted with skyscraper residential towers. Its skyline is immediately recognizable due to the heavy use of classic **Greco-Roman** architectural influences, especially at the topmost level.



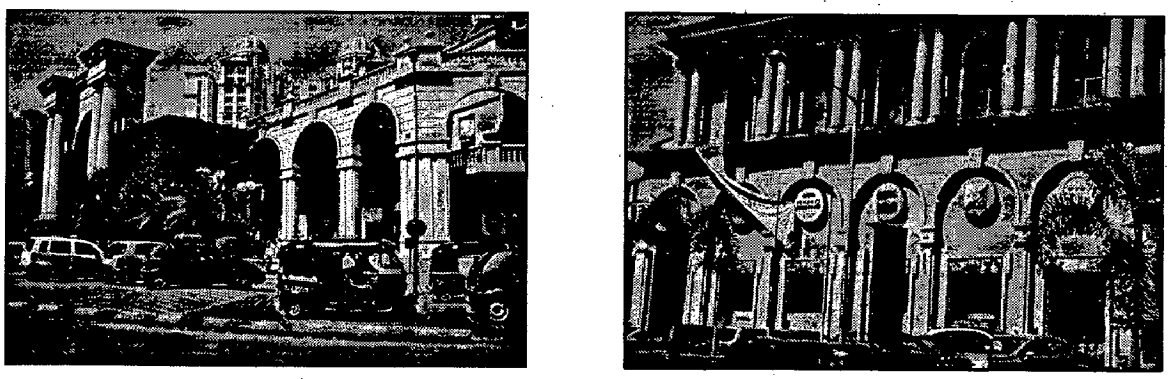
(a) (b)

Figure 7.15 a, b Building in Hiranandani Township, powai, showing character of that area *Image source*: author

Number of commercial buildings were set up in Hiranandani Gardens township and so now also been seen as a commercial hub.

The character is maintained throughout the area. Private signages / hoarding / billboards were not displayed on the outer facade for maintaining the architectural character as well as for avoiding the visual chaos. These were installed on the inner wall & spaces are left for the same.

Few signages are displayed over the outer facade but as one of the element of the character of that area (refer fig. 7.16).

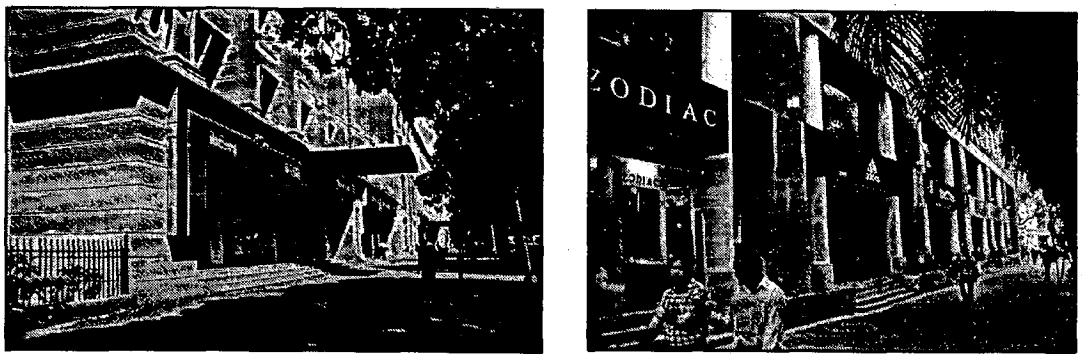


(a) (b)

Figure 7.16 a, b Signage displaying over façade in Hiranandani Township; *Image source*: author

In whole townships very few signages are installed on the outer façade so the viewer gets complete exposure to urban form but because of the absence of visual element, the view becomes monotonous.

In between two signages, which are erected over the façade, certain gap is maintained so as to avoid confusion and creates legibility. In multistoried building, the signage indicating activities on different floor, successfully catches the character of Greco-Roman architecture (refer fig. 7.17).



(a) (b)

Figure 7.17 a, b Signage displaying over façade in Hiranandani Township; *Image source*: author

Signages for street name were erected at regular interval, at a ht of 7 ft & can be easily readable by the pedestrian. Different forms and color coding were used to indicate different classes of traffic sign and so can be identified easily. This traffic signal unit are so developed that it gets the signals closer to the center of the driver's field of view.

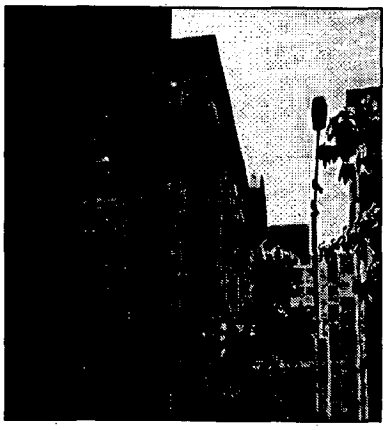


Figure 7.18 a, b Signage displaying different activities on different floor; *Image source*: author

Private signs are installed on the inner wall and so are not conflicting with traffic signs as there is a reasonable gap between the two.

7.3 DELHI

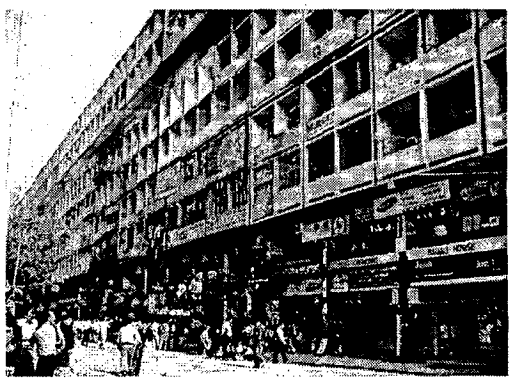
Delhi has been the capital of India all through the ages. Unlike the part cities of kolkata and Mumbai, Delhi has been the administrative centre of the country.

The decision-making process being in the administrative capital, it is a good place for launching of new products. The metropolises are the places where the producers target to introduce their products, and economy is controlled by the changing policies of the centre.

Figure 7.19 a, b Private graphics over facades, *Image source*: author

Hence, this metropolitan city, Delhi, is facing a challenge of a boom in the phenomena of graphics, which is affecting the urban visual character today. Hence a study of how they are happening and in what aspects affecting the urban setting is important here. Also Delhi being the capital is a trendsetter for the other places, so the space relationships being the same this would explain and help to understand the phenomenon in other cities.

(a)



(b)

Figure 7.20 a, b Private graphics affecting the urban character; *Image source*: author

7.3.1 SOUTH EXTENTION, NEW DELHI

In South Extension the billboards/ private signs have come up not only because it is a prime commercial area, but also because of its strategic location along the ring road.

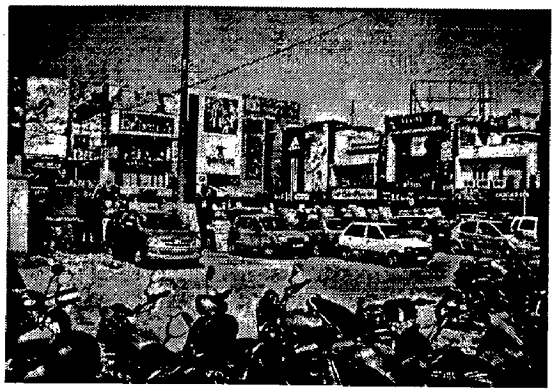


Figure 7.21 Commercial signages in South Ex., *Image source*: author

Figure 7.22 Billboard covering whole facade, *Image source*: author

The market was essentially designed keeping in view its function as local shopping center. The area is identified by large size billboards/ hoardings / private signs etc.

The area at present is too busy and too commercial to support any kind of architectural character. The building face is a jungle of advertisements, more than half of which have no concern with building facade. The current trend in the market is to convert the whole shop into a billboard, depicting the product being marketed by the store. This trend also creates identity for the shop. More such billboards would enhance the ambience of the place.

In case of traffic signs, regulatory / mandatory/ restrictive sign system does not consistently identify by its shape/ color as same color and same shape are used for indicating different functions (refer fig. 7.23). Information available on transit stop (bus stop), were not easy to understand because of cluttered background of private signs and during dark hours transit stop seems to be a medium to promote private product.

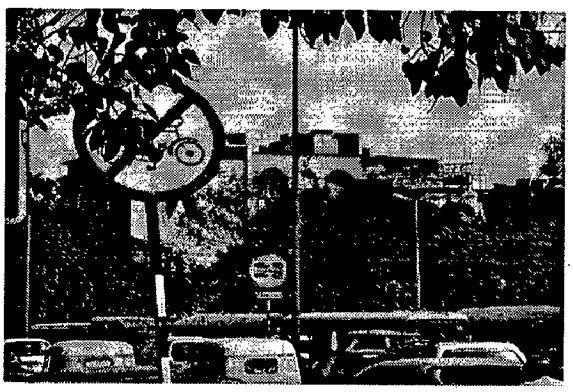


Figure 7.23 Different traffic action conveying through same shape & colour, *Image source*: author

Figure 7.24 Transit stop,
Image source: author

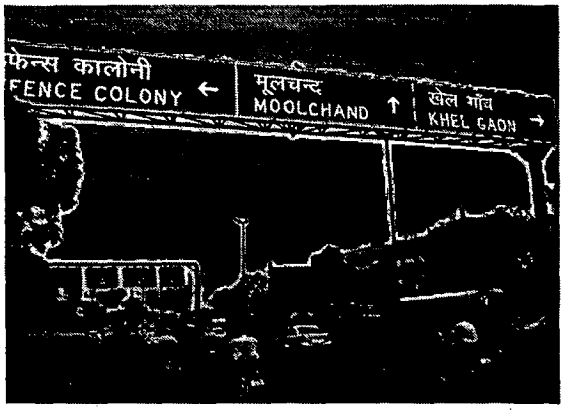


Figure 7.25 Guidance signage
Image source: author

The guidance signages erect along the width of the road relates both edges and helps to focus the line of vision but on the other hand creates confusion, for the people on vehicles because of the gap between the two.

7.3.2 CONNAUGHT PLACE, NEW DELHI

The architecture of Connaught Place has made such a strong statement that any alteration to it only harm the ambience of the place.

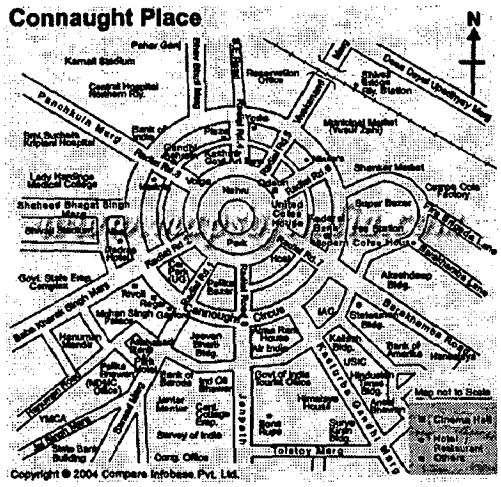


Figure 7.26 Map of Connaught place,
Image source: www.mapsofindia.com

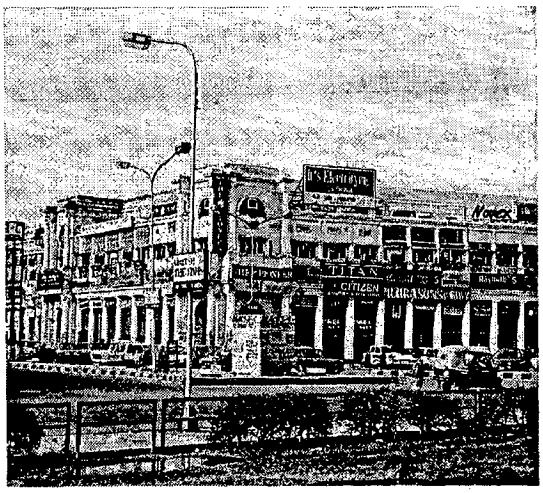


Figure 7.27 Connaught place,
Image source: author

The outer circle is the only area where the signages/ billboards have risen up. The inner and the middle circle are only restricted to small boards on the top of the shops.

The private signages are in direct conflict with the facades and public signages (traffic signs, signal lights etc) certainly create a tension between the two. Here individual and groups are express themselves by means of signs in their own style with little or no concern of character of that place.

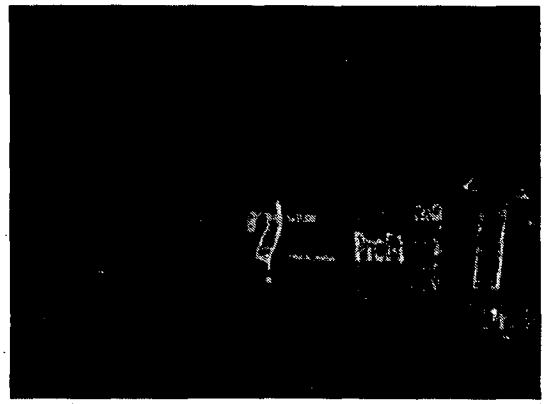


Figure 7.28 Transit stop during dark hours;
Image source: author

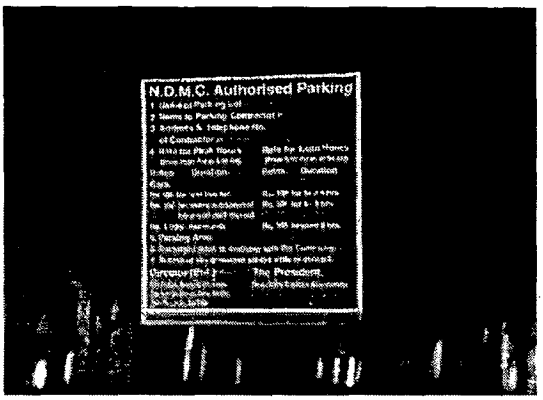


Figure 7.29 Public information sign (authorized parking)
Image source: author

During dark hours, transit Stops were not identified as independent unit but identified as a medium to promote private advertisement (refer fig. 7.28).

Here area is not defined for providing public information, like that in case of Boston. Signage informing redevelopment of that area but that is erected along very heavy traffic lane so nobody is able to get the information. Some of the signages are placed so closely that the back one is often hidden.

Public signages like authorized parking sign, erected at regular interval, but the lettering size is too small to read even by the pedestrian. Here also the traffic signs such as regulatory/ mandatory / restrictive sign are not identified by their form because same form is used to serve no. of function (refer fig. 7.29).

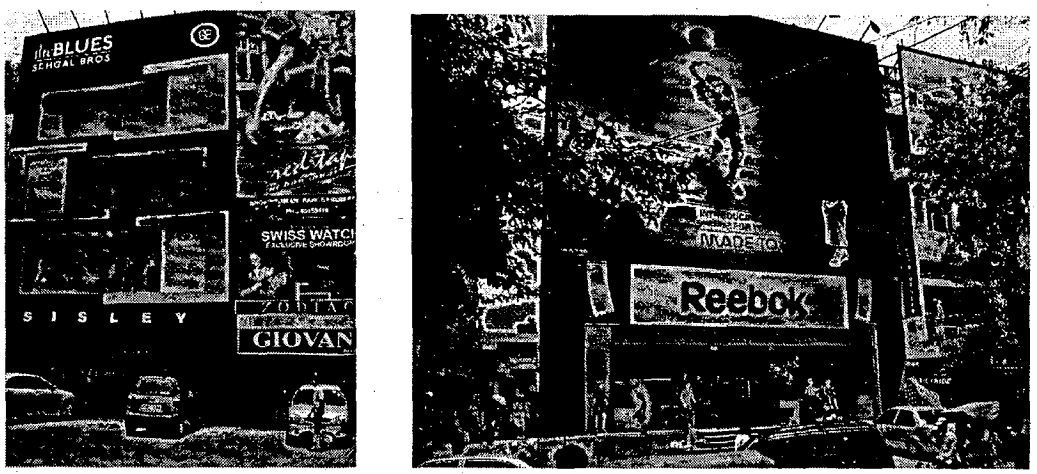
7.4 INFERENCES (from case studies)

1. The private signage/ billboards hoarding with their variety in design and sizes and the way they are presented give ideas about the urban form.

2. Major junctions where several movement system interlocks, people begin or end trips or transfer from one type of transportation to another, is an ideal location to transmit information to people on foot. Transit stop (bus stop) is one of the example.

3. The graphics/signboards enhance the existing character of an area if it has a strong character of its own.

4. If in case, the area does not have a strong character the street graphics give the area its own identity different from the other areas (refer fig. 7.30).



(a) (b)

Figure 7.30 a, b Private graphics having strong character; *Image source*: author

5. Where the buildings are at a set back, then graphics appear along the road, which are free standing. If buildings are at edge graphics appear on the building.

6. Where the space is not defined by built form, billboards help in orientation of the moving person, by defining spaces.

7. At traffic junctions, the traffic stops for a while and in absence of strong visual elements on the street edges the view become monotonous.

8. All parts of the sign system (in case of traffic signs) are designed to be visually distinctive against cluttered urban backgrounds but are not properly installed. Some are installed very closed to each other that the front one over hide the other

9. The guidance sign/ hoarding when it spans over the width of the road; relates both edges and helps to focus the line of vision (refer fig. 7.31).

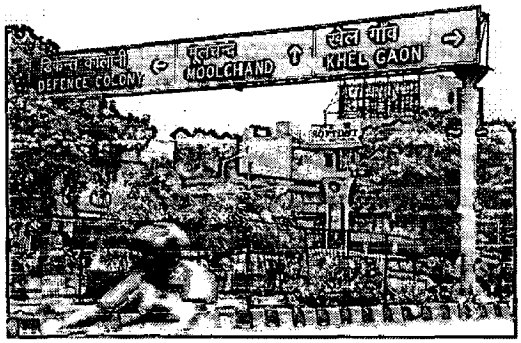


Figure 7.31 Guidance sign; *Image source*: author

10. Public buildings like police stations, hospitals etc are poorly identified. Generally when these areas are located nearby, there is normally no signing system to guide people to these important locations. If signages are there, than these public building signs are merged with other distant areas signs (shown in fig. 7.31 guidance sign)

11. The complexity of many small signs relates to pedestrian movement. Here for the people on vehicles this appears as disorganised.

12. Street graphics are located where there is maximum visibility. They are along movement channels and public area, which are activity nodes such as a commercial area.

13. Some prototype graphics/signboards are repeated at regular interval. These signboards are repeated to reach to the man on street.

14. Private signages are located with maximum visibility in relation to the bend of a road and their alignment changes as the road goes straight or bends slightly.

15. In case of traffic sign, same colour, same shape is used to convey different types of actions, which creates confusion for the people on vehicles. For eg. White circle with red border is used for no parking, loading/ unloading as well as for speed limit and braking information (refer fig. 7.32 & 7.33).

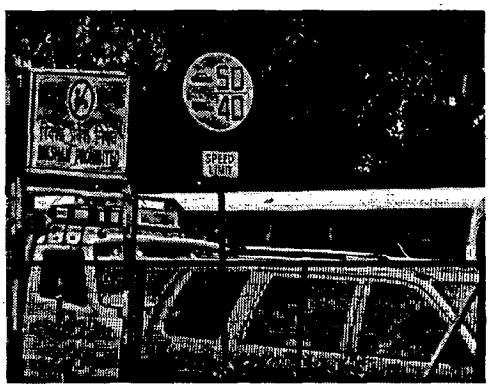


Figure 7.32 Sign displaying speed limit
Image source: author

Figure 7.33 No parking sign for rickshaw
Image source: author

16. Transit stop are the means to promote private advertisements because of which these are easily identified but route maps and other transit information were not displayed. Also the route no. of buses is displayed in a linear fashion, hence not clearly visible by the users (as shown in fig. 7.34).

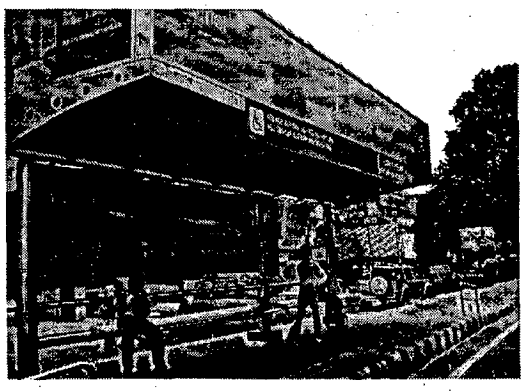


Figure 7.34 Transit stop; *Image source*: author

"Make it simple. Make it memorable. Make it inviting to look at. Make it fun to read".

Leo Burnett

CHAPTER 8

CONCLUSIONS AND GUIDELINES

8.1 CONCLUSIONS

It is true that coordinated street graphics are used to keep an observer, visually awake and enhancing his driving experience. But on the other hand, if not designed /installed properly, distracting the attention of the viewer. Driving on the street is not a pleasant experience, with the heavy traffic and the chaotic picture over facades; the traveler is under mental pressure and looks for respite along these routes.

The urban designers, planners and the agencies suggest that the multitude of signs is chaotic, they are an added strain on the eye, they are in direct conflict with the built form. Therefore ban on these graphics is the only solution- but is it really practical concept in today's world. Therefore what is the SOLUTION? Or is there no solution at all? Or is controlled and coordinated graphics a better solution.

The only solutions for the mental pressure of the viewer are the organized graphics that are designed in coordination with the architecture of that area. The fact remains that the graphics are used for providing information, guidance etc and it is for us to develop their potential for a better urban landscape.

In present scenario advertising plays very important role and the graphics are an integral part of the advertising world. The graphics/sign plays a very important role in promoting the products and awareness among people.

The graphics also in a way are generative of the employment for a number of artists, carpenters, electricians and advertising agencies.

8.2 DESIGN GUIDELINES

8.2.1 GUIDELINES FOR PRIVATE SIGNS

1. VISIBILITY OF STREET GRAPHICS (from moving vehicles)

The visibility of street graphics should be high so that while reading, the message does not conflict with the speed at which one is traveling.

- At a fast speed, time taken by an observer to read a particular message should be very less. And hence minimum number of alphabets is advisable. This decreases the total surface area required, hence hoardings can be grouped together in the same structures vertically, one above the other. This creates a better visual impact as well as highlights the hoarding structure in the absence of repetitive hoardings at small distances form each other (refer figure 8.1, proposed placement of private graphics)

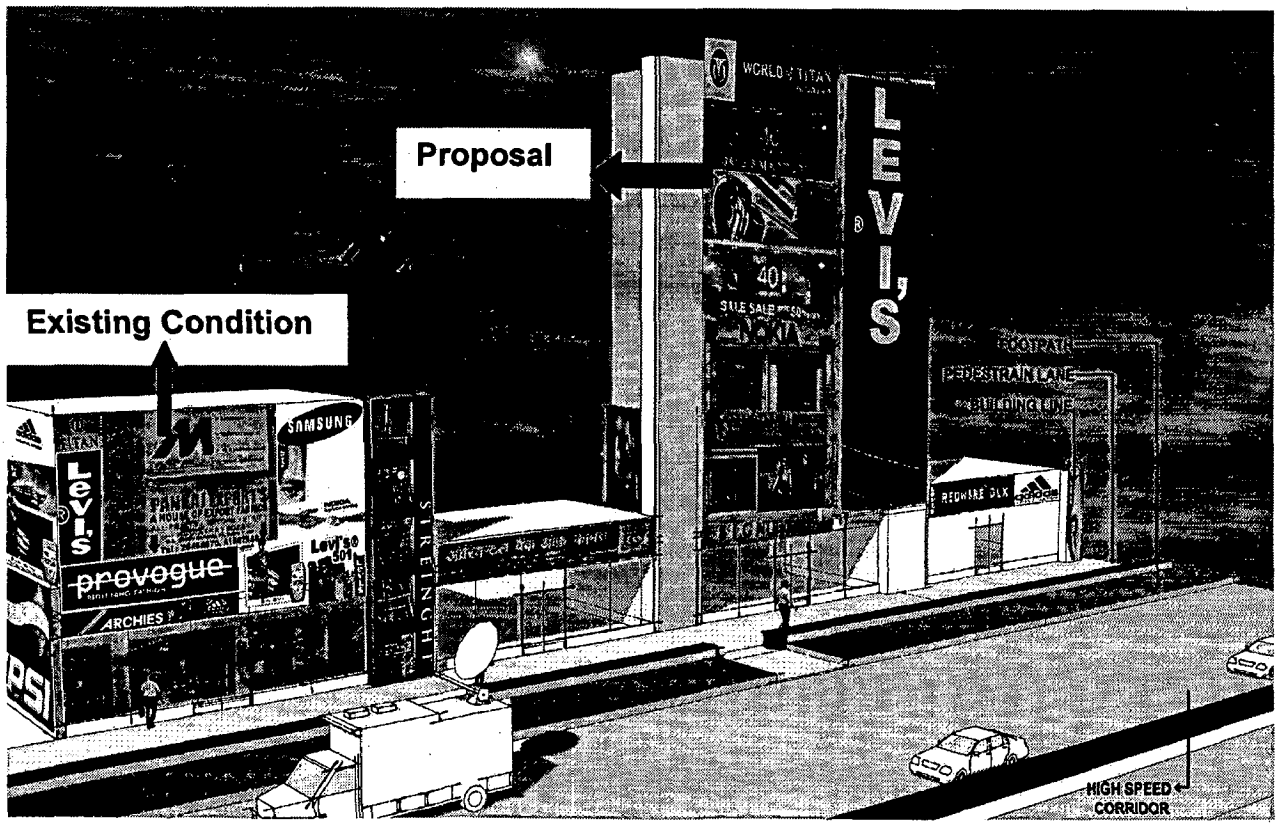
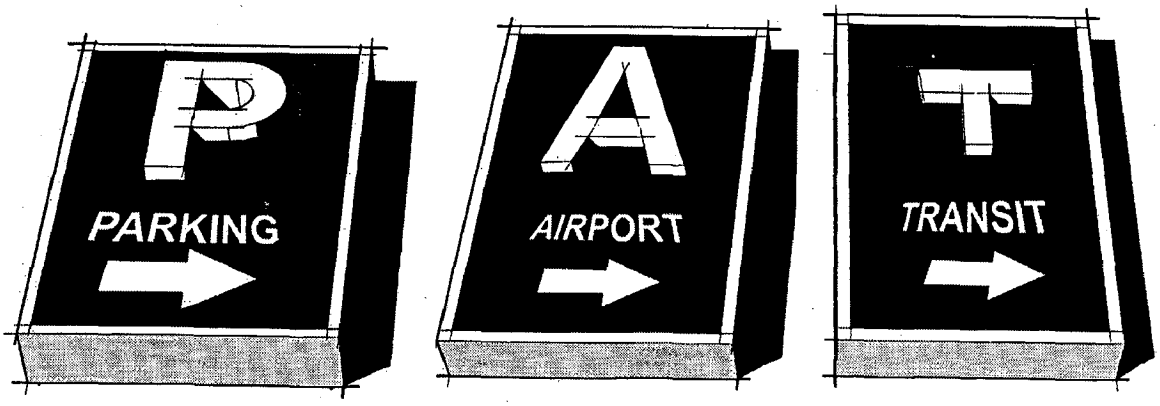


Figure 8.1 Proposed placement of private graphics; Source: author

- Along high speed corridor, if single graphics is used then it should be of the recognizable size For eg. Graphics that are used to cover the whole façade of buildings at upper level (here lower level is left for smaller detail of the products offered within the buildings, for the pedestrians) (refer illustration 8.3, conceptual view).

- On moving vehicles, the numerous small signboards, which are repeated, creates disorganised look. This can be corrected by controlling these numerous small size graphics along the road. And also for high speed movement corridor the number of advertisements should be restricted. Permitted graphics are also of size, which is perceptible to motorist as well as pedestrian.

- Because of the limit on number of alphabets, trailblazer's marks should also be used along the high speed corridors. This can help in recognizing the particular destination within a very short interval.



(a) (b) (c)

Figure 8.2 a b, c Trailblazer sign, Image source: author

- The graphics for pedestrian should highlight the smaller details of the product/ service, which the shop/ building offer. There should be no obstruction in between the sight line and the product offered.

For pedestrian the lettering size used, should not be very large.

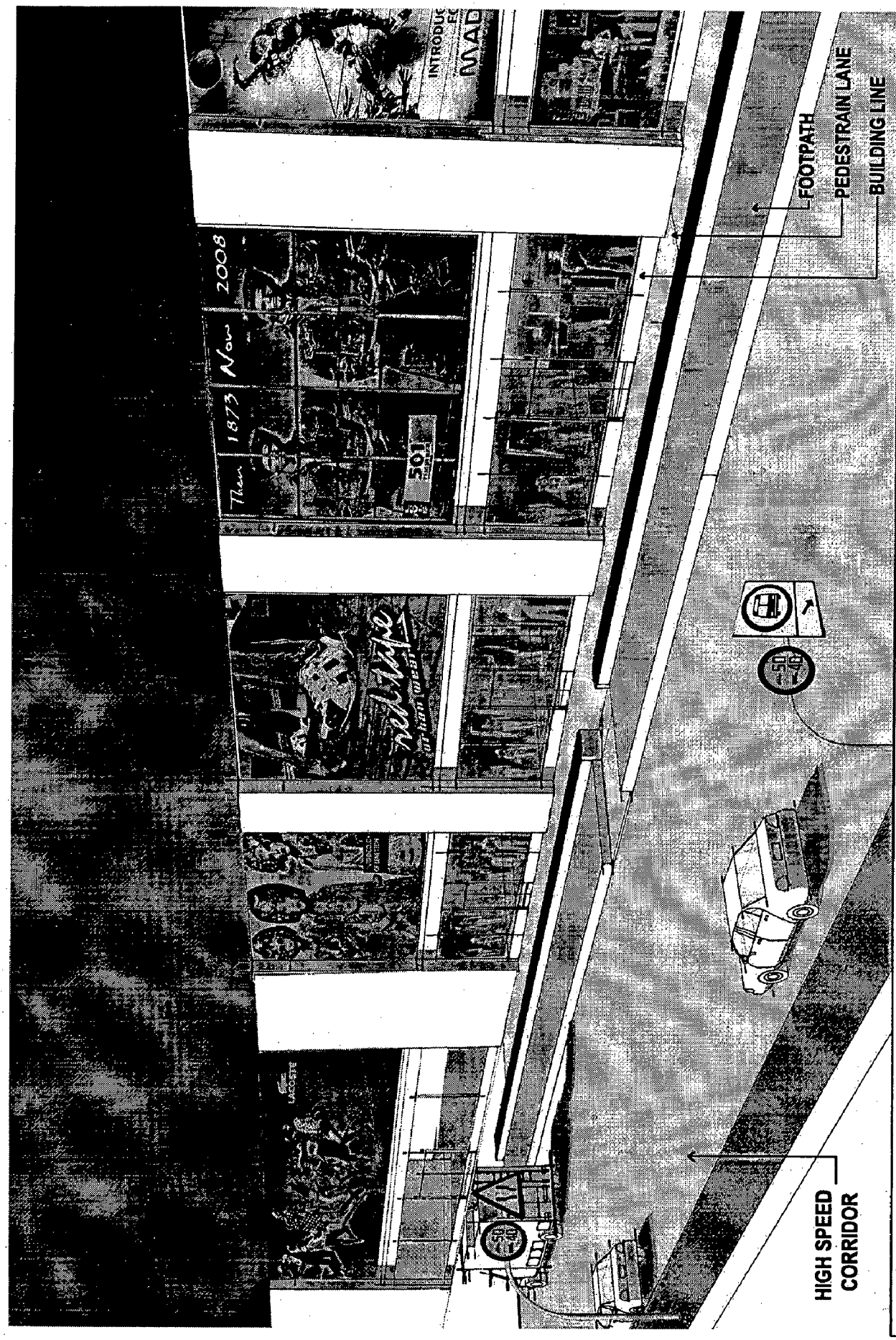


Figure 8.3 Conceptual view showing large sized graphics along high speed corridor; Source: author

2. CHARACTER OF STREET

i) If the area has a strong character of its own, the graphics there should be designed and placed in a way so as not only respond but also enhance the character of that area.

ii) In a situation, where the area does not have a strong character the graphics / private signages should give the area its own identity different from the other areas.

- For responding the strong architectural character of the street, the signs should come at a specific height and be of such a design content which should harmonise with the background and complement it. . By being at the same height guided by the façade structure they strengthen the facade character of the existing building

- For maintaining the character of an area, sign placement plays a very important role.

- The architecture of the building should dictate the sign placement, i.e. if a sign band exists such as a recess in the brick, it should be used.

- Signs should not crowd, obscure or alter the appearance of windows, doors or the architectural features of the building.

Graphics are placed / installed, in a way, as dictated by the architecture of buildings, results in reducing the overloading as well as confusion created between different graphics.

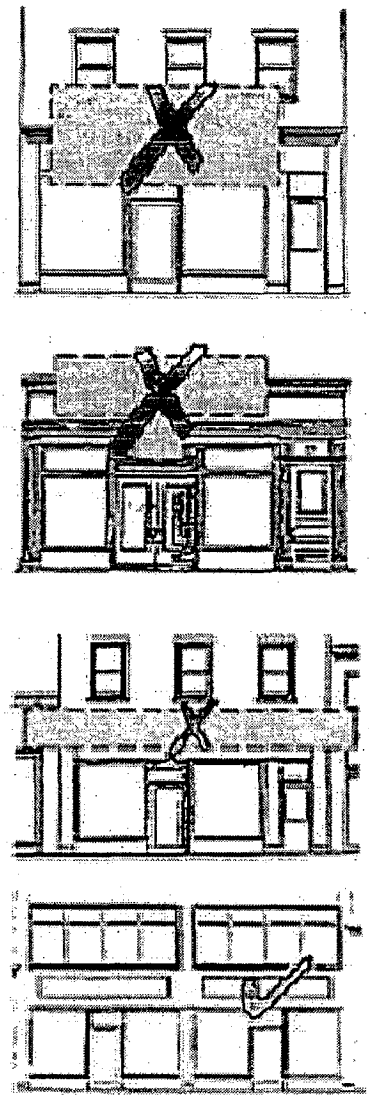


Figure 8.4 Placement of graphics
Source: author

- The size of the sign is also important. It should be determined primarily by the architecture and the scale of the building, and often shall not be as large as the maximum allowed under the building code or Zoning Ordinance.

- The area having no strong architecture character, than the graphics should be designed and placed in relation with certain theme. This can give the area a separate identity different from other.

- The graphics should reflect the moods by the way they are structured. For areas, which have a festive character, multiplicity of signages should be allowed with banners, colourful signs etc. which reflect the character.

3. OVERLOADING

i. To limit visual clutter/overloading, all signs that are permitted in an area must be directly related to businesses, services or products offered within that premises. No extra graphics should be permitted in the area other than the graphics of products offered within that premises. This reduces the reasonable number of graphics. Also help in concentrating over the useful graphics.

4. SCALE OF SPACE

To ensure that the hoardings do not distort the existing scale of space.

i. The height of the hoardings should respect those of the surroundings.

ii. In case of flyovers roof hoardings may be allowed but keeping in view its effects on the ground space perception.

5. TRAFFIC HAZARD

Private graphics were seen as the traffic hazard and distract the attention of moving vehicle i.e. creates confusion, mostly when the road bends.

i. At the bend of road and where the vision needs to be guided, graphics may be effectively used. Here the graphics should be perceived as a group and the

total visual impact of giving direction should be fulfilled. This total effect may be achieved by controlling same height line and base line ad placing them as continuous facade at that location(refer figure)

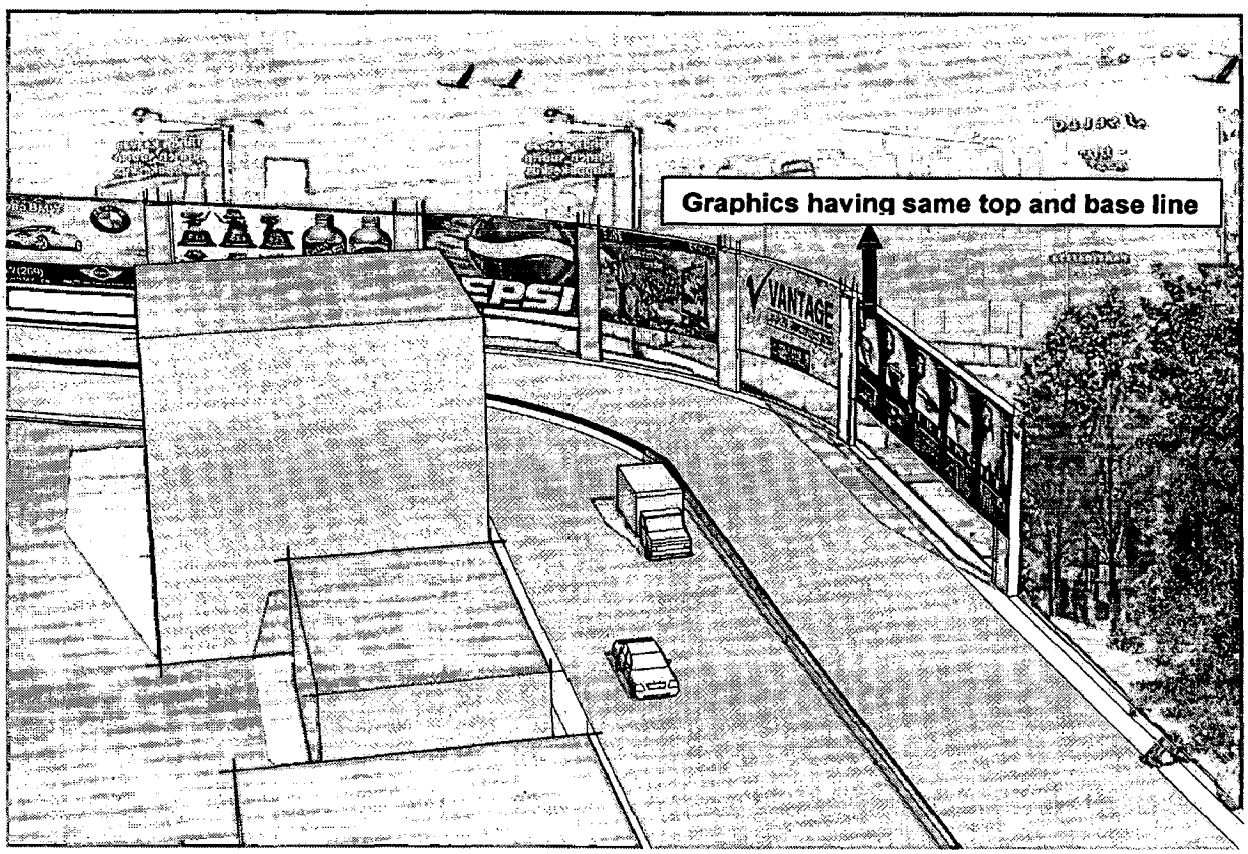


Figure 8.5 Placement of graphics (at bend of road) having same top line and bottom line
Image source: author

8.2.2 GUIDELINES FOR PUBLIC SIGNS

1. PUBLIC INFORMATION

Public information like future development of the area, general orientation (direction from that area) cultural information, physical, historical facts about the area etc. should be provided through graphics.

i. The graphics indicating public information, required for the people on foot, should installed /erect at such a location that it become local forum for communications and can itself stimulate people to talk with each other, transit stop is one such example.

ii. As the people on vehicles were not required these type of information so the signboards indicating such information should not placed along moving corridor.

iii. These graphics should be designed to evolve by means of feedback mechanisms which enable content to continually be made more relevant to the needs and interests of the people who use it.

2. INFORMATION OF "PUBLIC BUILDINGS"

Many a times, hospitals and government offices of all kinds are poorly identified. Even when these areas are located nearby, there is normally no signing system to guide people to these important locations. And if signs are available they create confusion in the eyes of viewer.

i. Generally the graphics for public building merges with other directional sign and other route signs, as shown in figure 7.31, and hence creates confusion. So these building signs should be distinctly presented on the street.

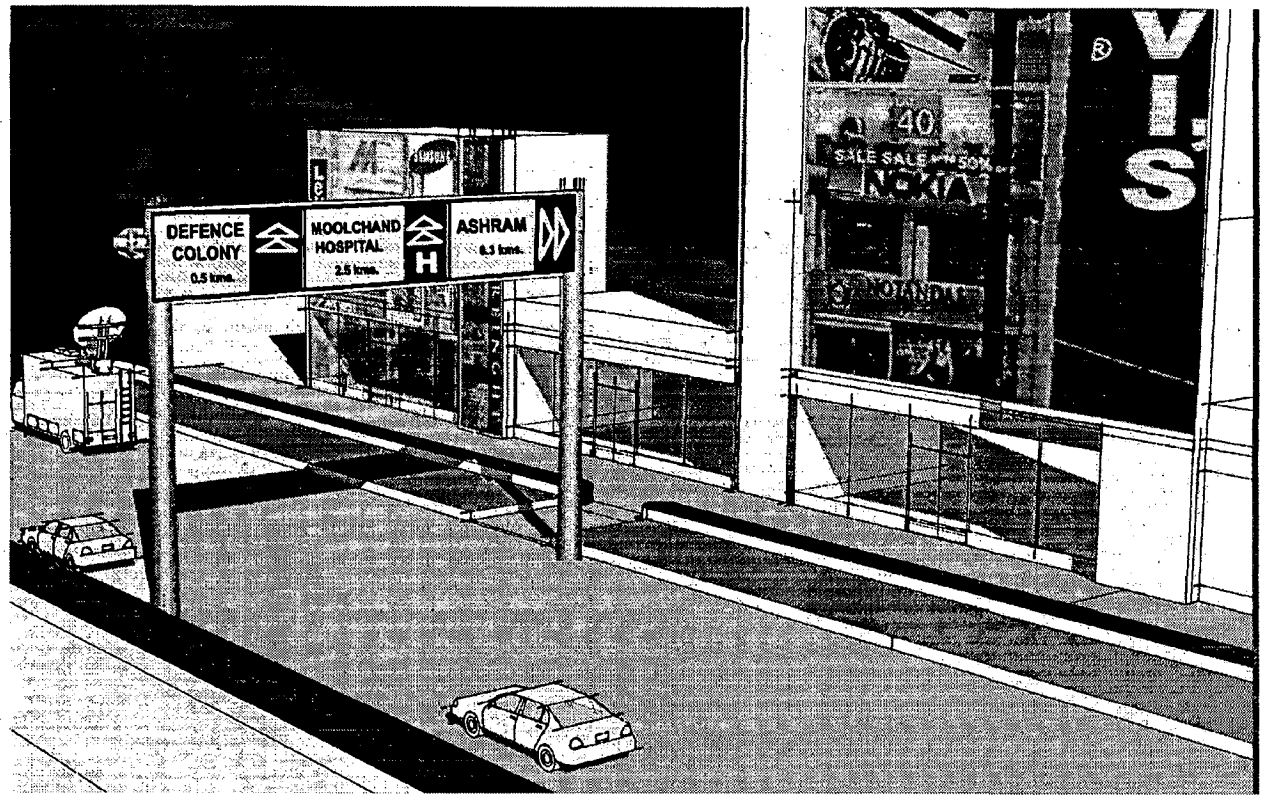


Figure 8.6 Conceptual view showing graphics of hospital building different from other areas
Image source: author

ii. If these sign merge with directional sign than these sign must be presented with a colour different from directional signs and even different important building uses different colour for there presentation.

8.2.3 GUIDELINES FOR TRAFFIC SIGNS

1. INFORMATORY SIGNS

Being in the nature of a direction, an order, a warning, a prohibition, or an instruction, the graphics/ traffic sign has a purpose not simply to communicate but rather to produce an immediate reaction in the viewer.

i. Information requiring different types of action by the driver should be conveyed differently. Same color, same shape should not used to indicate two actions and vice versa i.e. one action is indicating in only one way.

ii. Color, shape, message form, and location should be consistent for signs, signals, and markings conveying the same type of information.

For eg. Red colour in a circle is consistently identified for braking action. And hence Red colour in a circle should be used for stop sign either in traffic light or as a braking sign on the street.

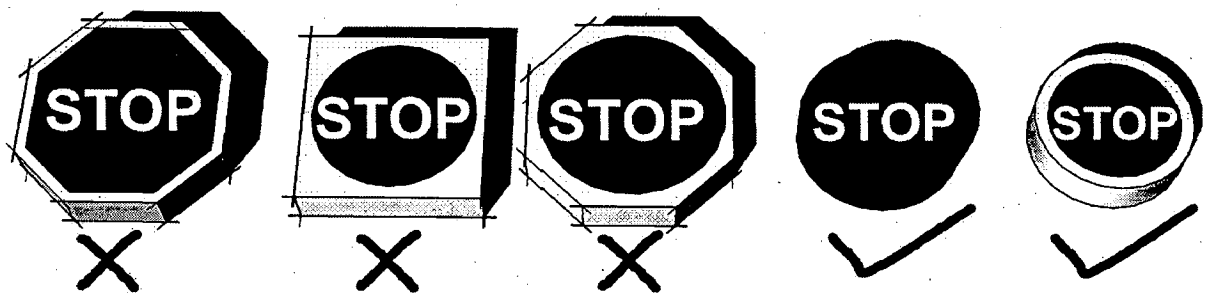


Figure 8.7 proposed form for braking action; Image source: author

iii. The system should prepare the driver in advance for turning decisions and oncoming road and traffic conditions.

iv. All parts of the system should be designed to be visually distinctive against complicated urban backgrounds.

3. GRAPHICS FOR "PEDESTRAIN"

The graphics should be inclined for reading by the pedestrian, leading readers naturally in the direction of major facilities and other destination (refer figure 8.8).

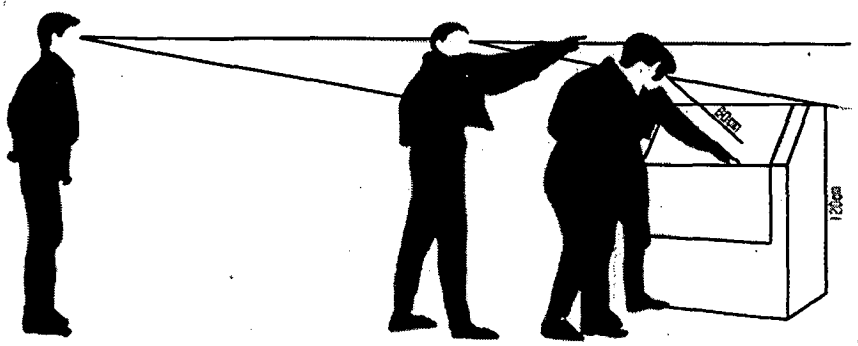


Figure 8.8 position of graphics for pedestrian; Image source: author

Street information should be presented along side walks, in a way that the message should be perpendicular to the line of sight of the pedestrian (refer image 8.8)

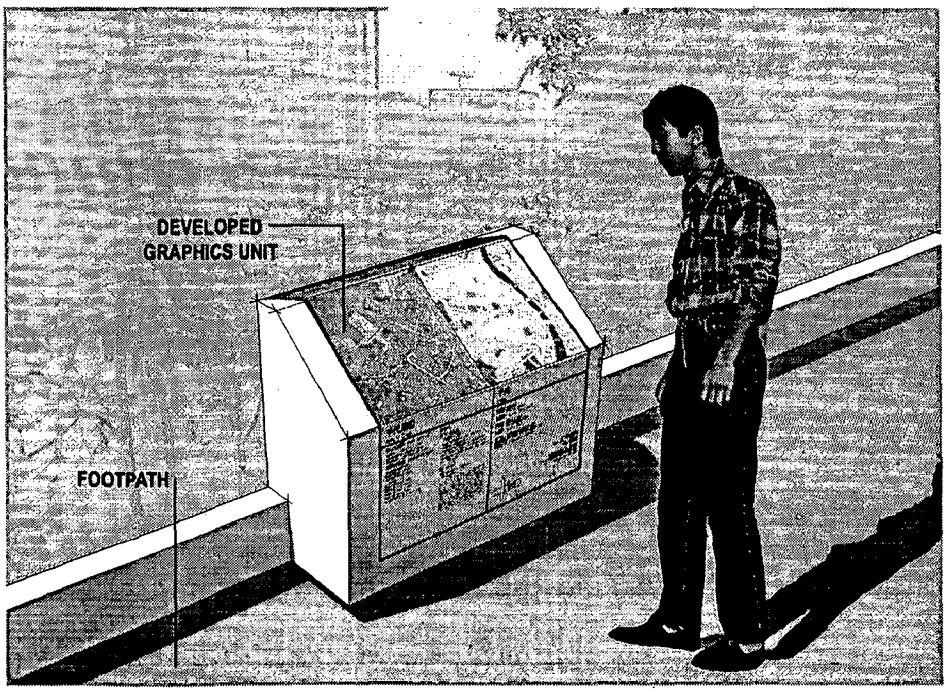


Figure 8.9 street information displayed for pedestrian;
Image source: author

4. INTERSECTION.

At intersections, where numbers of road forks are there, generally creates confusion like "which road goes where" or in other words which road to follow etc.

i. Map diagrams, should be installed at the intersection that can give a complete picture of an intersection.

ii. This map diagram should also indicate the relative importance of road.

8.2.4 GENERAL GUIDELINES

i. No graphics shall compromise traffic safety through visual obstruction, physical obstruction, distraction of drivers, confusion with traffic signals or illegibility

ii. The graphics shall not contain language, images or messages which in the circumstances are offensive.

iii. The graphics shall be established in, or allowed to deteriorate to, a state which constitutes a significant detraction from the amenity values of the neighbourhood. Requiring any such sign to be removed modified or upgraded.

iv. No two graphics shall be installed very close to each other that the viewer is not able to distinguish between the two.

v. The minimum height of lettering used over graphics should be such that it effectively communicates the message.

vi. Colour coding used in graphics should not merge with the surroundings.

8.3 HYPOTHESIS

Graphics play an important role in facilitating communication to the public not only in relation to business advertising but also in terms of community information and safety. Graphics can contribute to the vitality of a locality, especially in commercial centers. Conversely, signs also have the potential to detract from the visual amenities of streetscapes, residential neighbourhoods, commercial areas, and can contribute to traffic hazards.

Control is exercised over the size, number and location of signs in the community environment. In the business environment only limited control can be justified, with the main concern to minimise visual clutter from proliferation of freestanding signs and to minimise unsafe and poorly maintained signs.

{PRIVATE}Graphics that are effective, compatible with the amenity values of the surrounding environment and which has minimal negative impact on traffic and pedestrian safety are permitted.

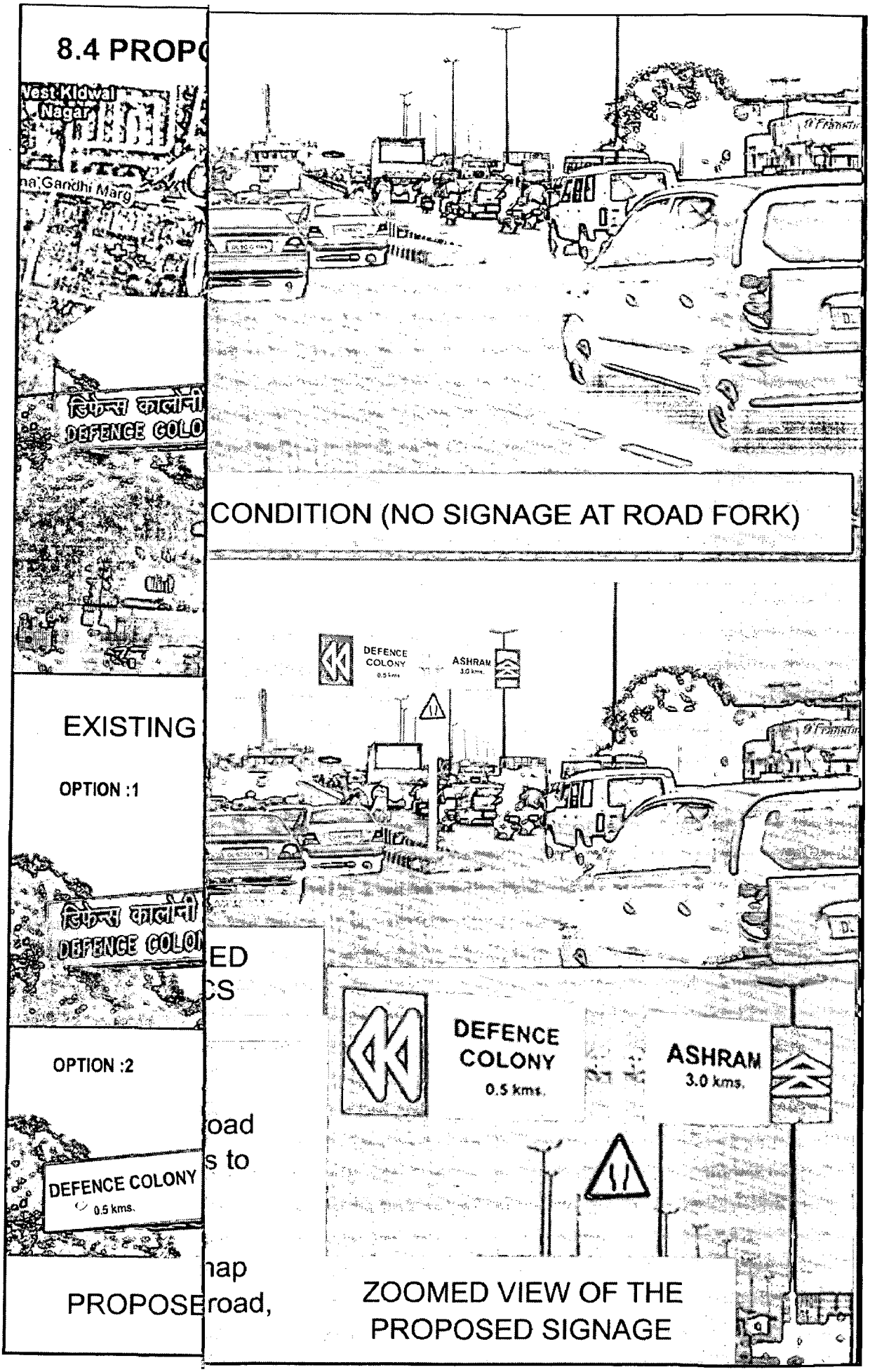
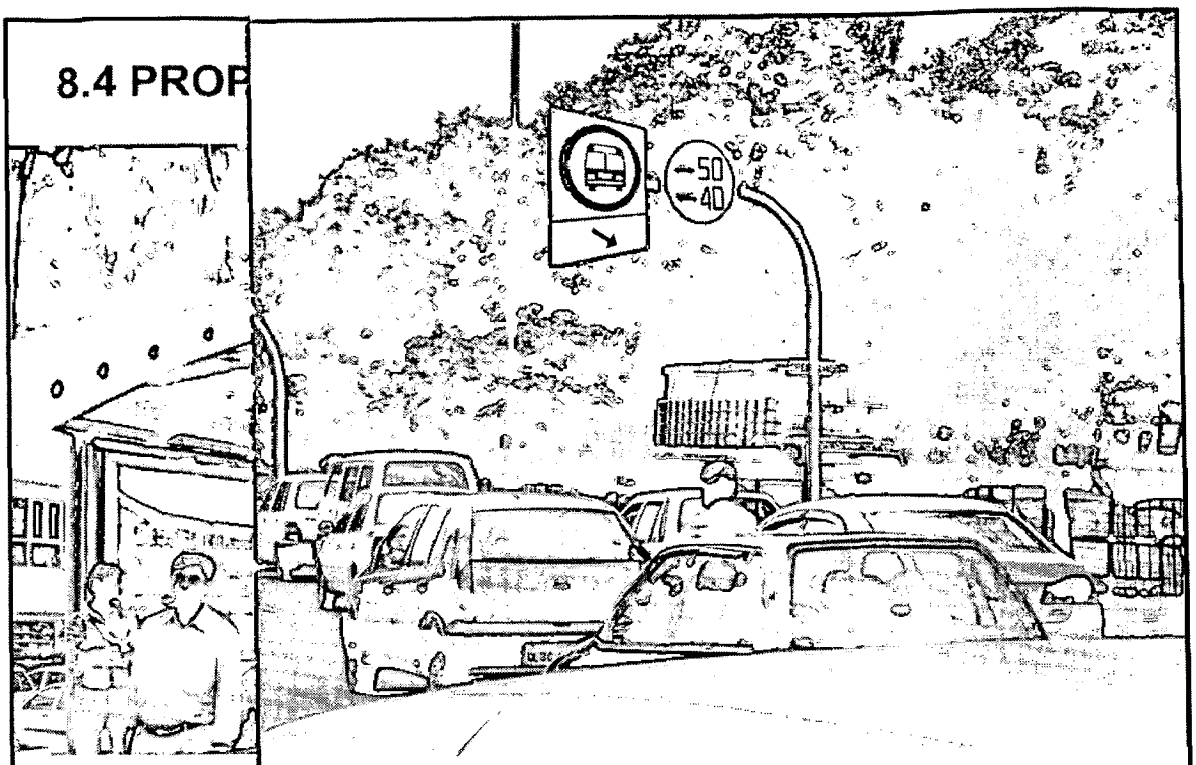
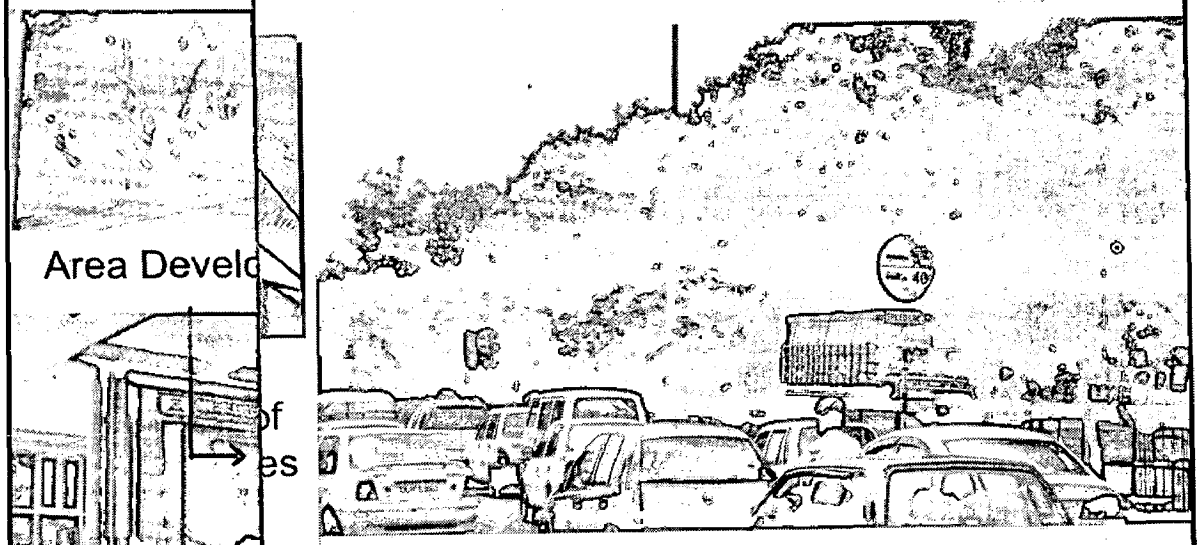


Figure: 8.9 Pro

8.4 PROP



EXISTING ED TRAFFIC CONTROL UNIT



Area Develc

of
es

EXISTING CONDITION (Traffic control sign is not clearly visible by the fast moving vehicles)

GN

gets the signals closer to the center of the driver's

also increased so that it should be clearly visible

Figure: 8.10

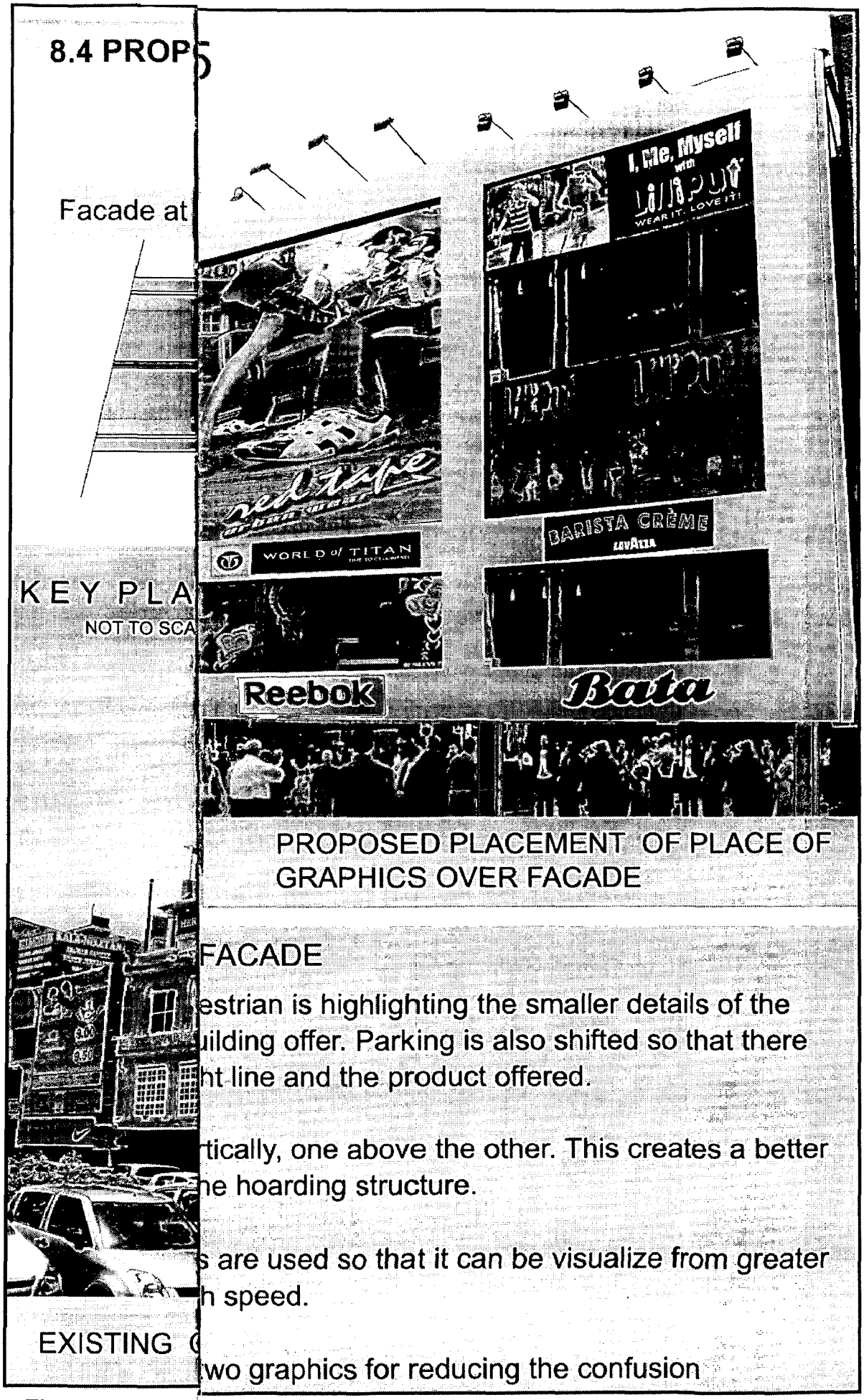
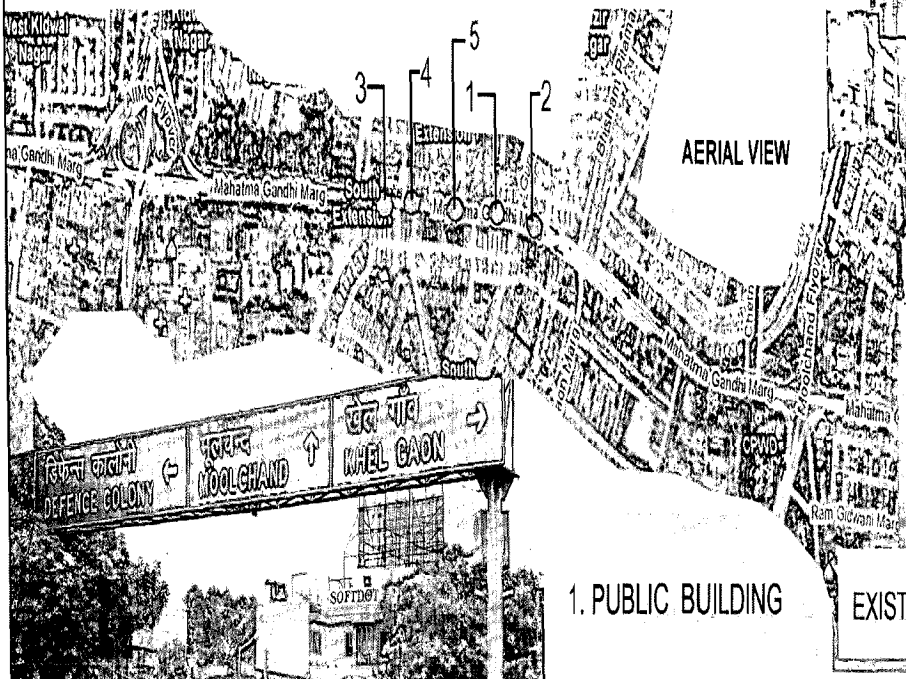


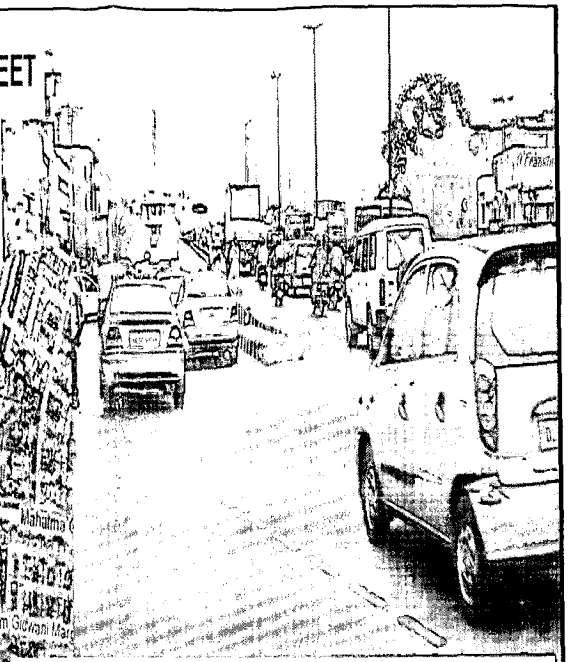
Figure: 8.11 Pro

BIBLOGRAPHY

8.4 PROPOSED MODEL FOR STREET GRAPHICS OF SOUTH EXTENSION STREET



AERIAL VIEW



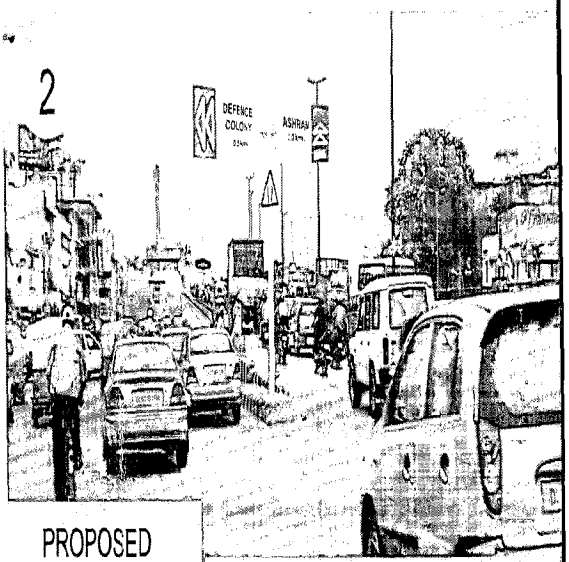
EXISTING CONDITION (NO SIGNAGE AT ROAD FORK)

EXISTING SIGNAGE FOR MOOLCHAND HOSPITAL

1. PUBLIC BUILDING

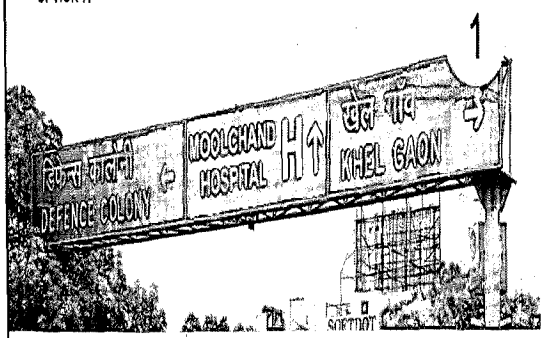
Public building, Moolchand Hospital, presented with a colour different from other local areas.

Trailblazer signs is also used so that the graphics can be easily identified from fast moving vehicles

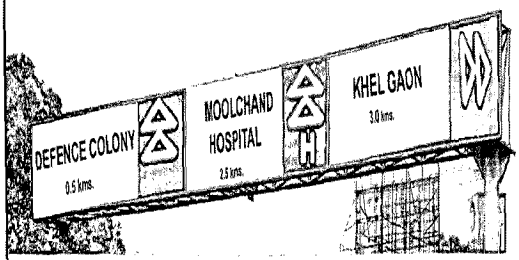


PROPOSED GRAPHICS

OPTION :1



OPTION :2

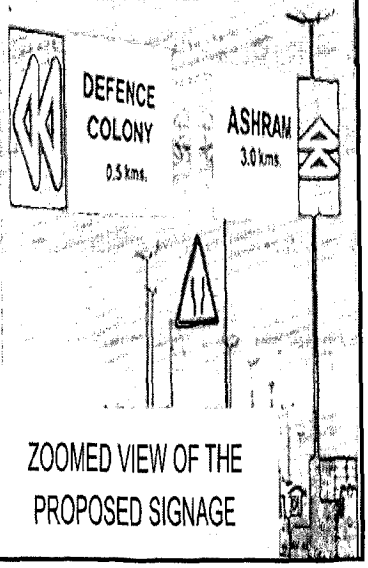


PROPOSED SIGNAGE FOR HOSPITAL BUILDING

2. INTERSECTION

At intersection, guidance sign along with road profile map is proposed that guide peoples to different road forks.

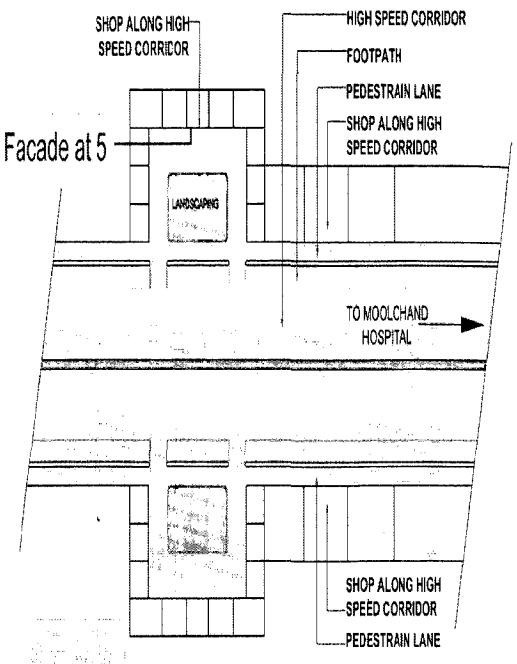
If the intersection is more complex, than map diagram, indicating relative importance of road, can also be installed.



ZOOMED VIEW OF THE PROPOSED SIGNAGE

Figure: 8.9 Proposal for model area (South Extension): Source author

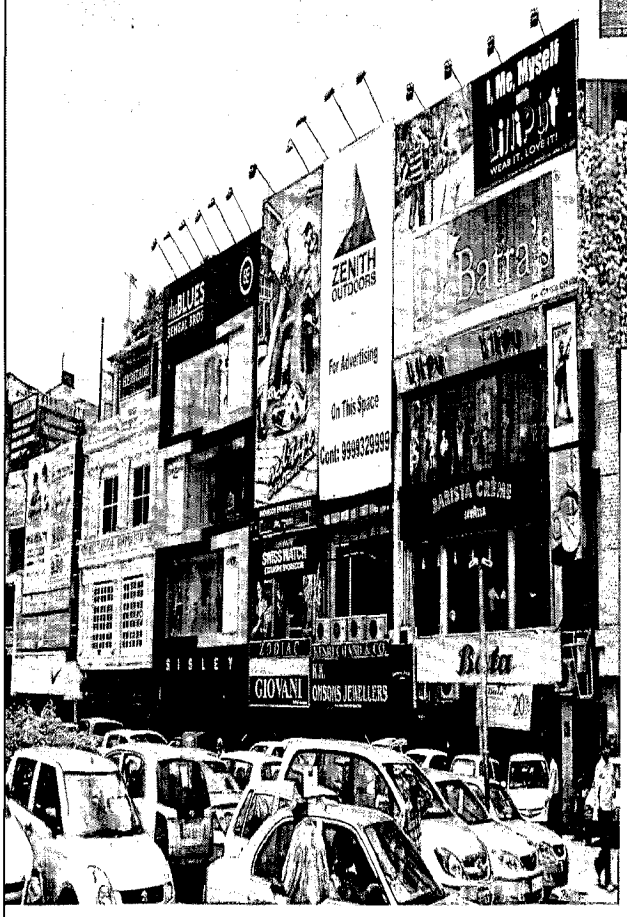
8.4 PROPOSED MODEL FOR STREET GRAPHICS OF SOUTH EXTENSION STREET 5



KEY PLAN

NOT TO SCALE

PROPOSED PLACEMENT OF PLACE OF GRAPHICS OVER FACADE



EXISTING CONDITION

2. PRIVATE GRAPHICS OVER FACADE

The graphics,at lower level, for pedestrian is highlighting the smaller details of the product/ service, which the shop/ building offer. Parking is also shifted so that there is no obstruction in between the sight line and the product offered.

Hoardings are grouped together vertically, one above the other. This creates a better visual impact as well as highlights the hoarding structure.

At higher level,large sized signages are used so that it can be visualize from greater distance and also recognised at high speed.

Gap is also maintained in between two graphics for reducing the confusion

Figure: 8.11 Proposal for model area (South Extension): Source author

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