Study: Removal of Boundary Walls and Reclaiming of Setbacks into Public Realm.

Setbacks had originally found its place in the Delhi Building Code for several reasons:

- As a continuation of the Walled Low density Bungalow Typology introduced by the British designers in 1930s.
- To accommodate future widening of roads
- To allow for fire access within the private property – since boundary walls did not allow fire trucks to circulate on public street/ footpaths - to access the buildings.

However, it has been seen over the past decades that Boundary Walls have become one of the main causes of unsocial behavior and lack of safety for women on Delhi Streets. Presence of boundary walls visually disconnects the people on the street from people inside buildings – therefore making pedestrians vulnerable to street crimes. In addition, "unwatched" boundary walls have made the city into a massive open public toilet!

Goals:

Why remove Setbacks and Boundary Walls?

1. **CREATE SAFETY THROUGH "EYES ON THE STREET"**
2. **USE FOR WIDENING OF FOOTPATHS, especially in Commercial, Office and Institutional Areas.**
3. **CREATE SPACE FOR OTHER STREET USES LIKE "DESIGNATED" HAWKER ZONES.**

Strategy:

In Commercial, Institutional or Mixed Use Areas that have setbacks and boundary walls:

Fig 1: Impact of removing setbacks & boundary walls.

1. Create "eyes on the street" by:
   a) By removing setbacks and boundary walls and expanding Road RoW close to Building Edge.
   2. Or, utilizing setbacks to create street-fronting retail, cafes, reading rooms, or "well designed" hawking zones, etc… which generate a more active street frontage.

This would allow people from inside the building to look out on to the pavement, thus creating safety through visual surveillance.

3. Commercial facades should have minimum 30% transparency; 50% is more desirable.
4. Provide adequate Street Lighting for pedestrians and bicycles.
5. Create commercial/ hawking zones at regular intervals (10 minute walk from every home in the city) to encourage walkability, increase street activity and provide safety. (e.g. Mumbai, Shanghai)

Fig 2: Setbacks can be reclaimed to widen footpaths, add arcades for climate protection and create designated spaces for hawkers.

Key Guidelines and Constraints to be addressed:

1) Access to Fire Trucks should be possible for all buildings, since setbacks were originally meant for ease of fire-truck access around buildings. Once setbacks and boundary walls are removed, fire trucks may ply on footpaths within the Public Right-of-Way.
2) Entry-Exit to Buildings – both for vehicles and pedestrians should be respected.
3) The Solar Envelope must be respected. In Delhi, for "x"m of building height, a clear distance of "1.2x" must be left on the South side of the building face – in order to ensure a minimum of 4 hours of solar access on the shortest winter day (winter solstice).

Pilot Sites:

Three Pilot Project Sites are to be taken up for immediate detailed study and subsequent implementation:

1) **Indraprastha Complex**, in continuation with the Vision document already prepared by UTTIPEC DDA for the area. – (Multiple Government and Institutional Ownership)
2) **Barakhamba Road, Connaught Place.** (Private Commercial Ownership)
3) **Patel Road/ Pusa Road** (District Centre, DDA/ Private Ownership)

Tasks, Work Programs:

For each of the Pilot project sites, the following steps are to be undertaken:

BASE DATA COMPILATION:

1) Creation of an AutoCAD Base Map, based on Surveys or Google underlays.
2) Compilation of Site Data – Physical features, Landuses, Ownership Pattern.
3) Dimensioned map, showing setbacks and relative building heights, Entrance-Egress Points to the buildings for both motorized and non-motorised modes, and pedestrians.
4) Sections showing vertical and horizontal allocation of uses.
5) Current Solar Envelope Study (using SketchUp)

PROPOSALS:

6) Proposed Plan showing reallocation of spaces after removal of setbacks; New landuses if any.
7) Fire access plan.
8) Relocation of current uses (tentative)
9) Photomontages showing effect on Street/ Public Space character due to proposal.
10) Solar Envelope Study and Sections.

Timeline and Delivery Mechanism:

The project will take **16 weeks** to execute and will require part of the work to be sub-contracted to an external support consultant at a nominal lump sum fee.

Removal of Boundary Walls

Reclaiming of Setbacks into Public Realm.

March 2010

Need
Premise
Goals

Setbacks and Boundary Walls – Problems:

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However, it has been seen over the past decades that Boundary Walls have become one of the main causes of unsocial behavior and lack of safety for women on Delhi Streets.

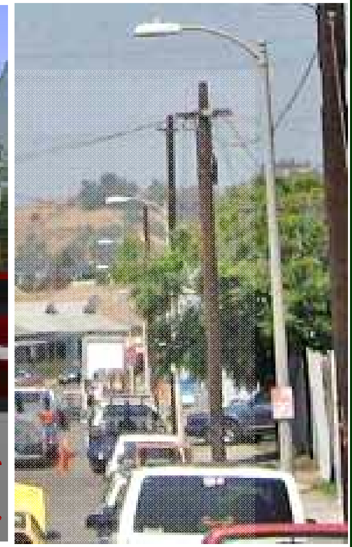
Presence of boundary walls visually disconnects the people on the street from people inside buildings – therefore making pedestrians vulnerable to street crimes.

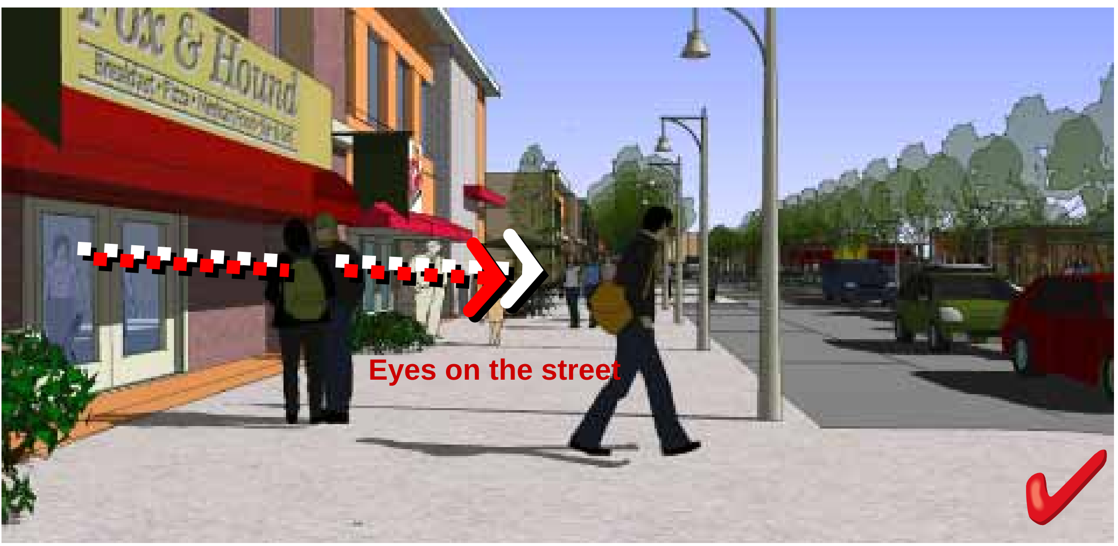
In addition, “unwatched” boundary walls have made the city into a massive open public toilet!

OBJECTIVES:

- Creating Safety through "Eyes on the street"
- Facilitating Connectivity
- Placemaking

Reclaim Setbacks and Remove Boundary Walls





For Safety:

Setbacks can be reclaimed to provide pedestrian safety:

1. Create "eyes on the street" – by removing setbacks and boundary walls and building to the edge of the street ROW. This would allow people from inside to look out on to the pavement, thus discouraging misbehaviour, shady corners, peeing, etc.)
2. Require commercial facades to have minimum 30% transparency.
3. Provide adequate Street Lighting for pedestrians and bicycles.
4. Create commercial/ hawking zones at regular intervals (10 minute walk from every home in the city) to encourage walkability, increase street activity and provide safety. (e.g. Mumbai, Shanghai)

For Comfort.

Reclaim Setbacks and Remove Boundary Walls

For climatic comfort:

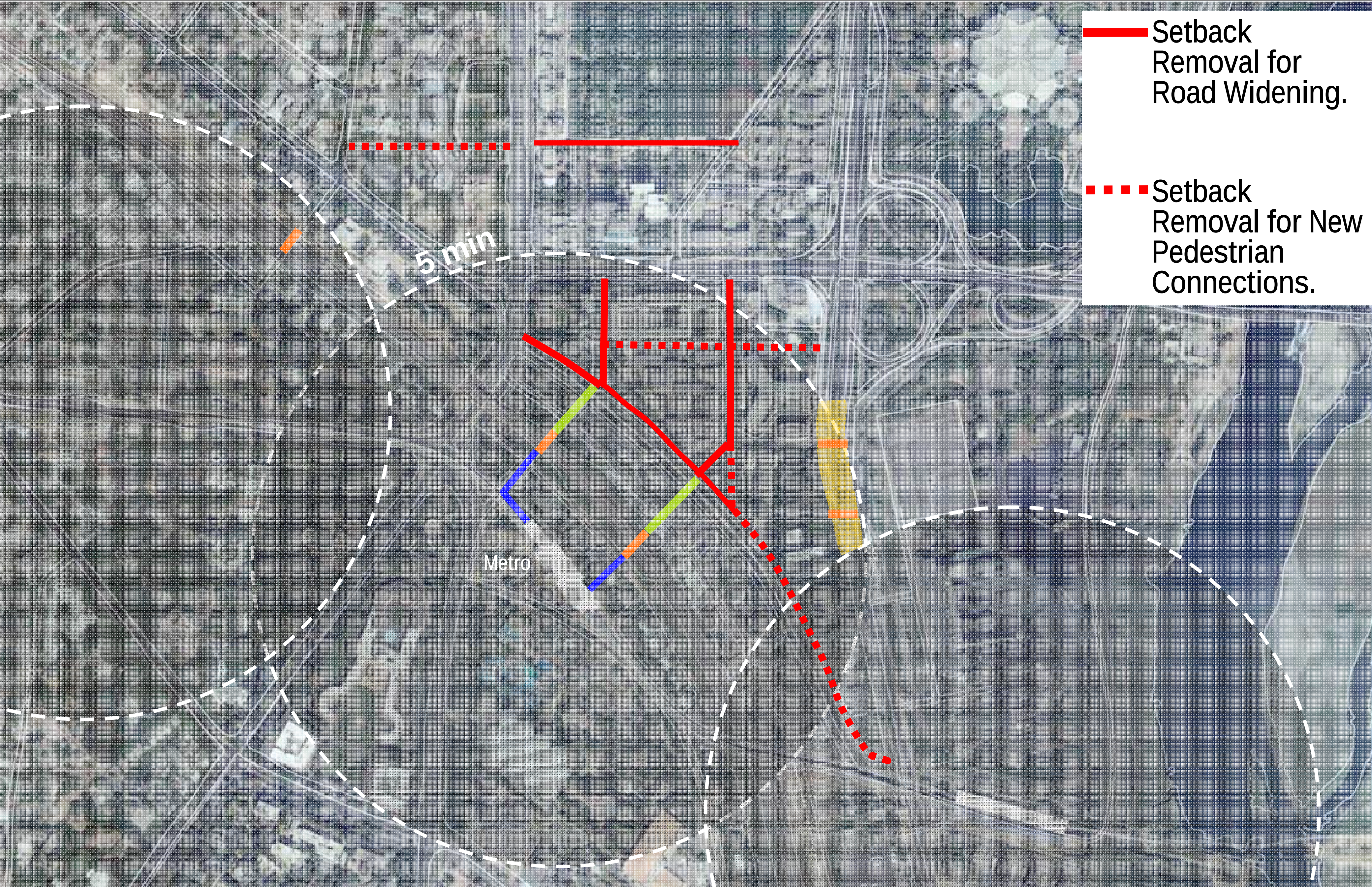
Setbacks can be reclaimed to provide shaded Arcades – along commercial and mixed use streets.

Setbacks may be reclaimed to make "legal" space for Hawkers – who are an essential part of Indian Street Life.

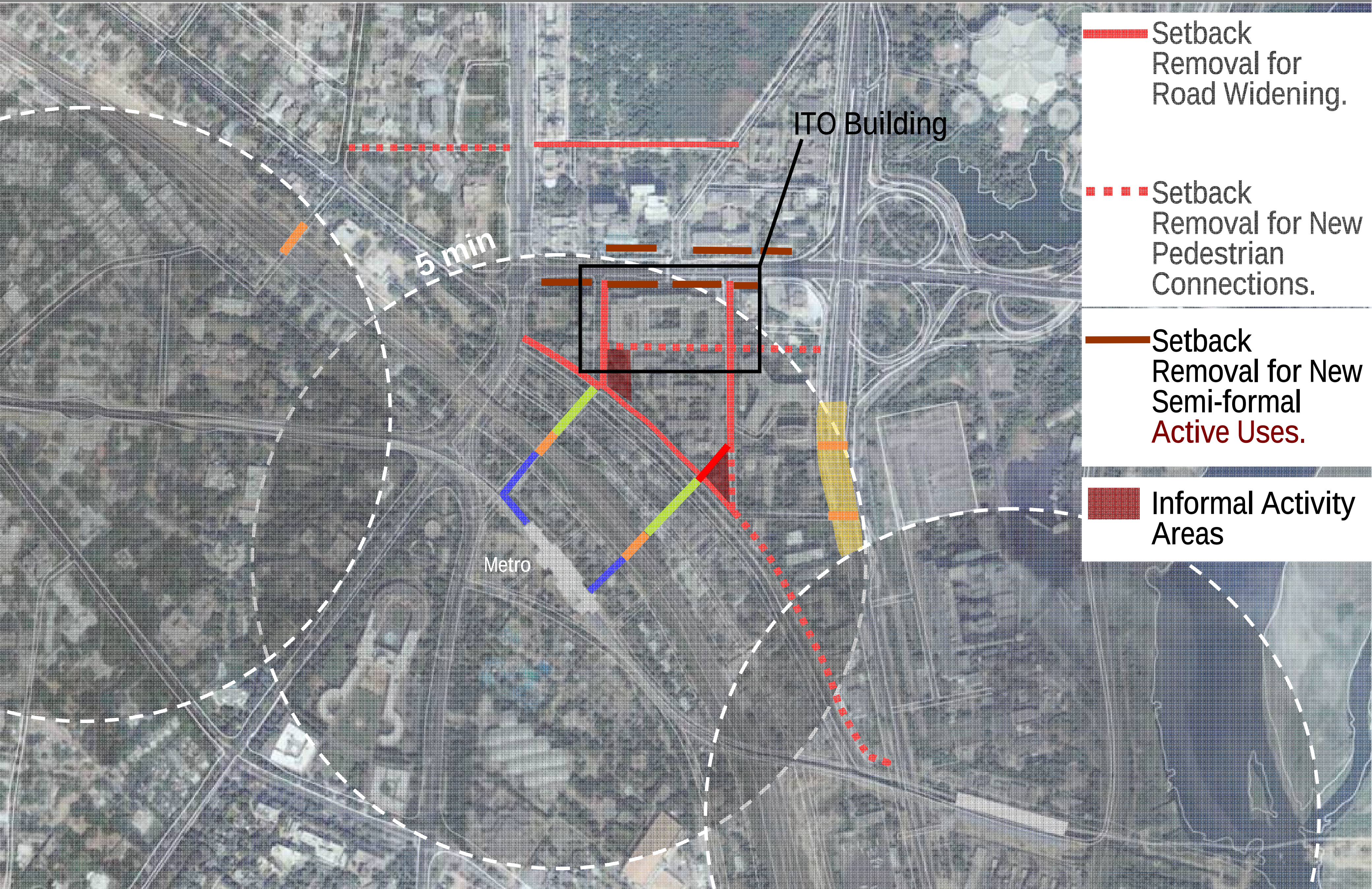
Sample Study:

Proposed Use of appropriated setbacks in ITO

ITO Areas Setbacks Reclaimed - For Increasing Connectivity to MRTS Stations



ITO Areas Setbacks Reclaimed – for Placemaking



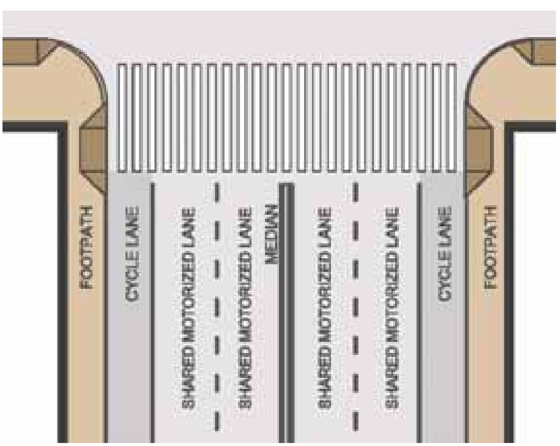
ITO Building – Existing Base Map

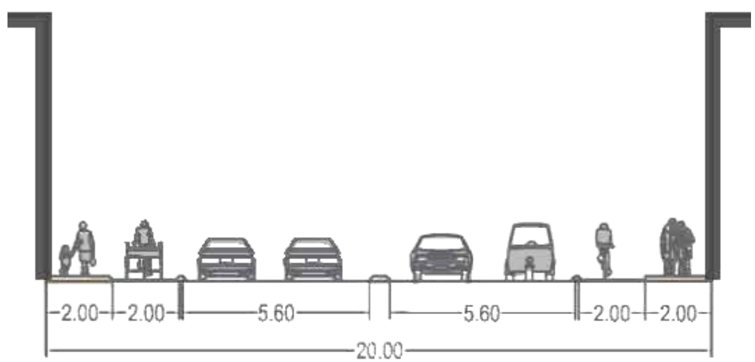
ITO Building – Propose Plan after reclaiming setbacks for various uses

Setback reclaimed to add active, pedestrian friendly uses

Setback reclaimed to add active, pedestrian friendly uses

Setback reclaimed to Widen Footpaths and accommodate Hawking Zones





Side-Effects/ Constraints to be Addressed:

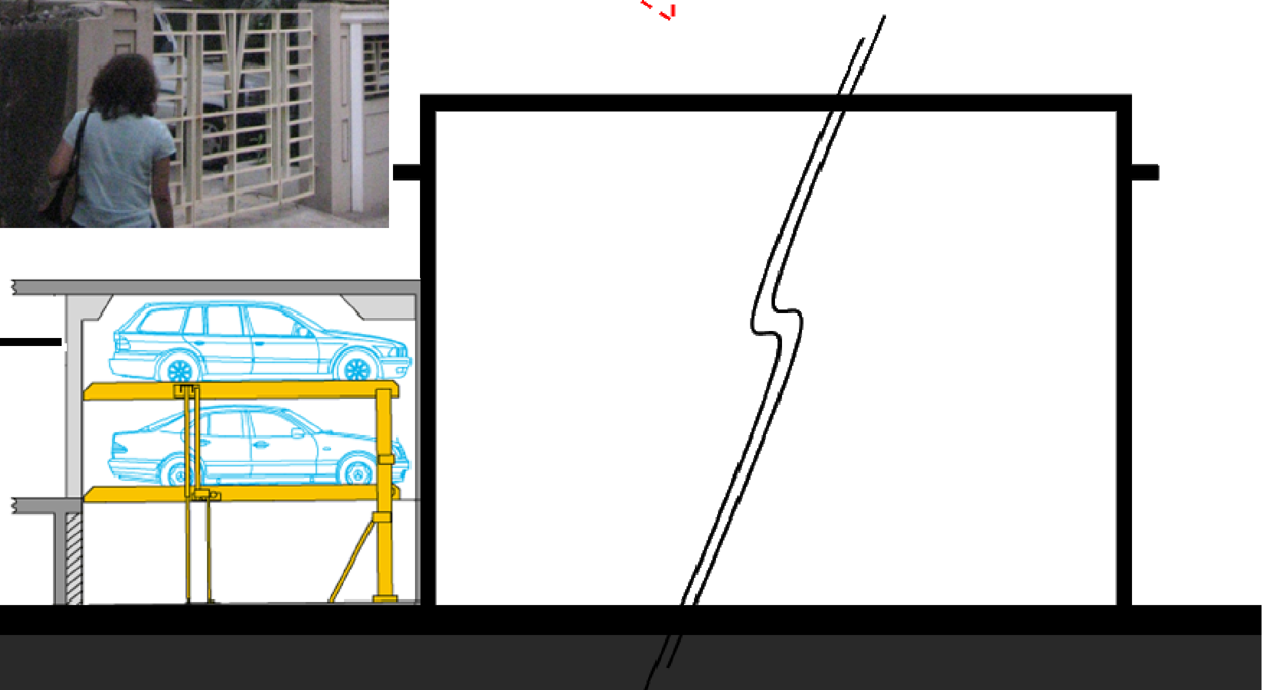
1. Fire Access
2. Entry-Exit to Buildings
3. Private Parking
4. Solar Envelope

1. Footpaths can be used for Fire-Truck movement – in absence of walls.

New Pedestrian-Only Entry

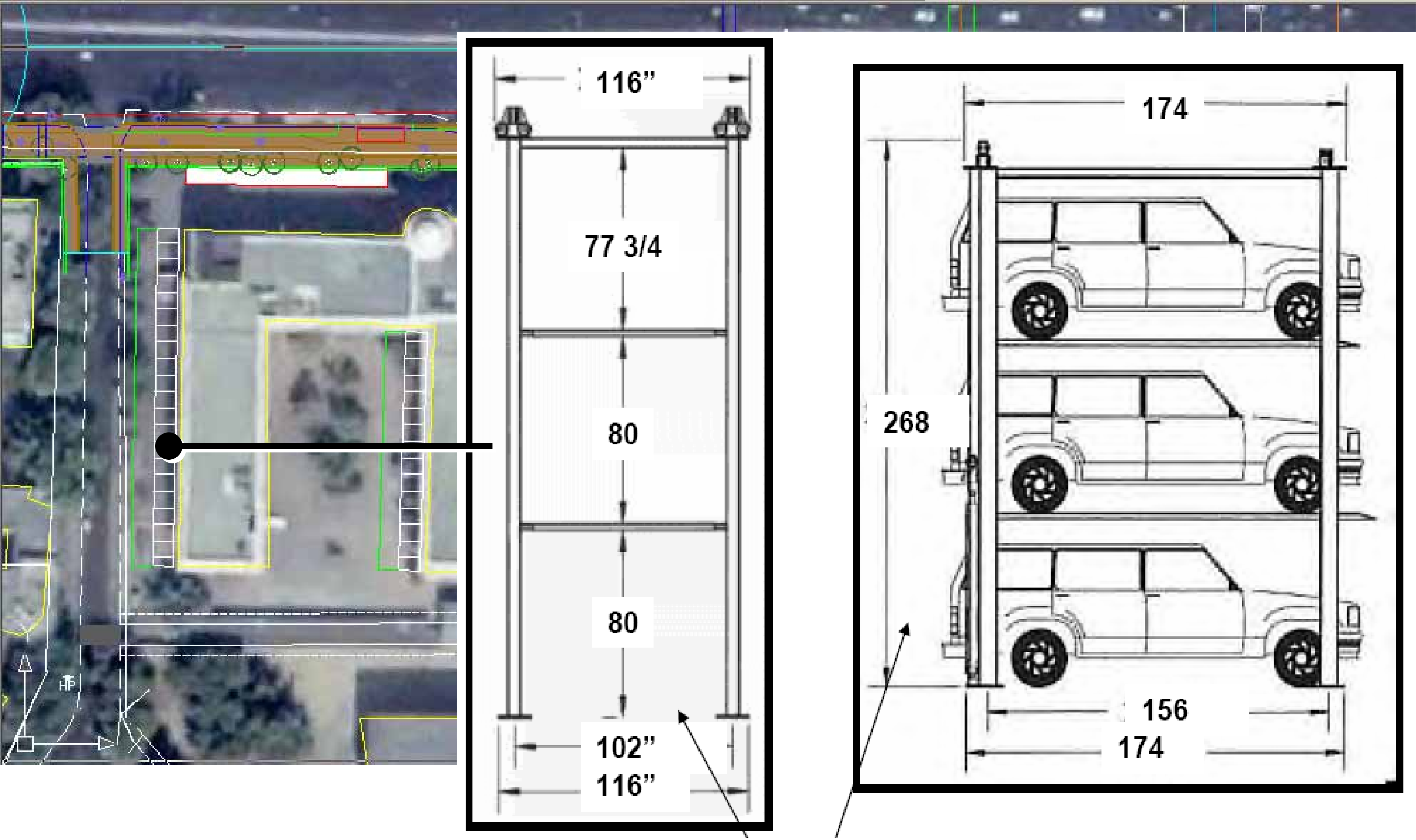
Vehicular Entries retained as before.

3. Private parking can be accommodated in Hydraulic Stacked Parking



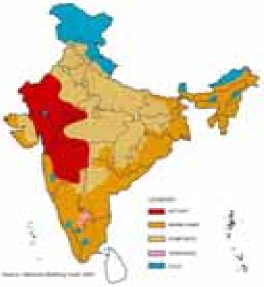
Push parking to the back with “car-lifts”

3. Private parking can be accommodated in Hydraulic Stacked Parking



3. Private parking can be accommodated in Hydraulic Stacked Parking

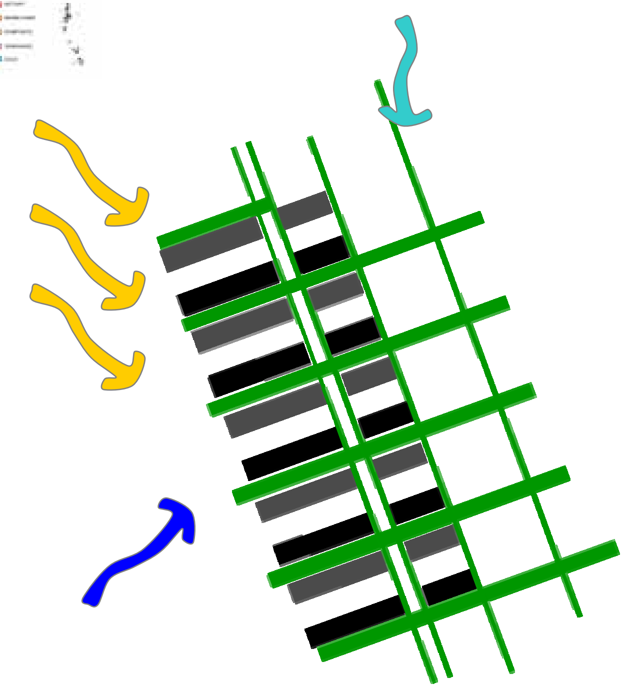
4. Solar Envelope must be maintained with an additions to Ground Coverage



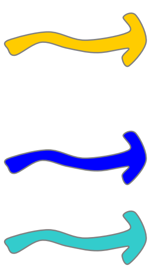
DELHI: (Composite Climate Zone)

Primary strategies for Energy Conservation and Comfort of residents in hot-dry/ composite climate of Delhi and Jaipur:

- Shading: to reduce solar gains and mitigate Heat Island Effect
- Optimal Solar access is required for daylighting and internal ventilation.



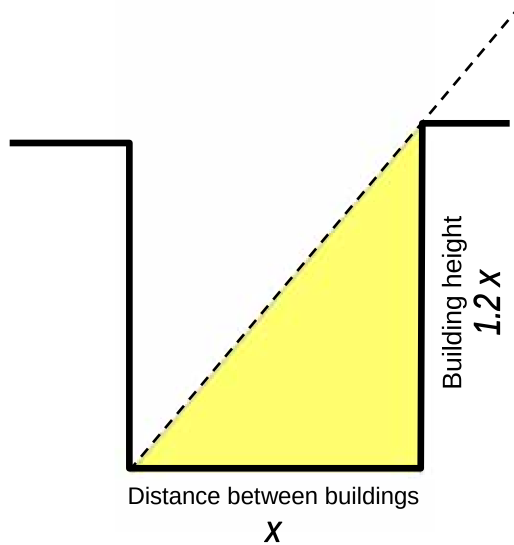
RECOMMENDED ORIENTATION OF STREETS:
20° to W-E axis



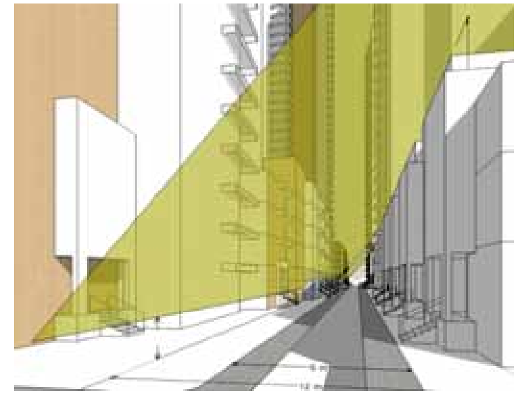
Hot-dry Summer winds (*loo*) from the North-West are extremely undesirable. So streets, homes and open spaces should be protected and oriented away from these winds..

Southwest monsoon winds are very strong and should be protected against.

Winter winds should be restricted with tree plantation and narrower North-South Streets.



- **Optimum distance between buildings for adequate daylight access and air movement.**



Microclimate of public streets:
Narrow streets provide shading and air movement – and therefore greater comfort for pedestrians. Spacing between buildings should be enough to allow daylight access to all homes.

Deciduous trees provide shade in summer and let the sun through in winter.
Sidewalks should be at least 3 m wide, clear of obstacles, and well maintained, so people can walk on them.

WORK PROCEDURE:

1. Conduct Physical Survey of the Area.
2. Create CAD Base Map from High-rez Google Earth Image.
3. Identify areas for boundary wall/ setback removal – and propose suggested use for each reclaimed street frontage.
4. Illustrate change through Photomontages, explain benefits.
5. Identify mechanisms for Reclamation, incentives, etc.