

Street Design Process



Why do we need better streets?

Streets are amongst the most valuable assets in any city.

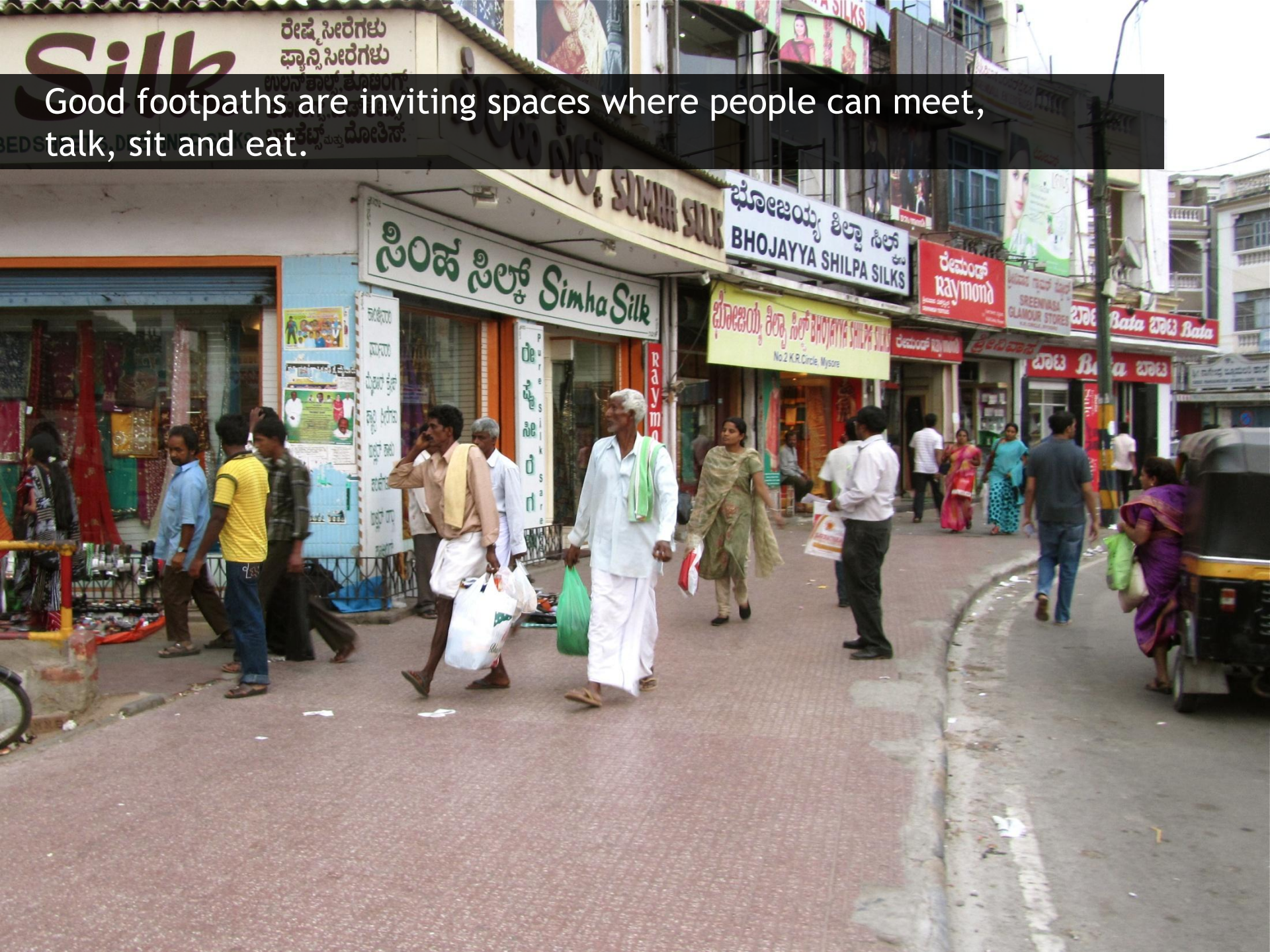
They allow people to travel, meet, interact, do business and have fun.

Streets designed for people is the symbol of a city's progress and development.



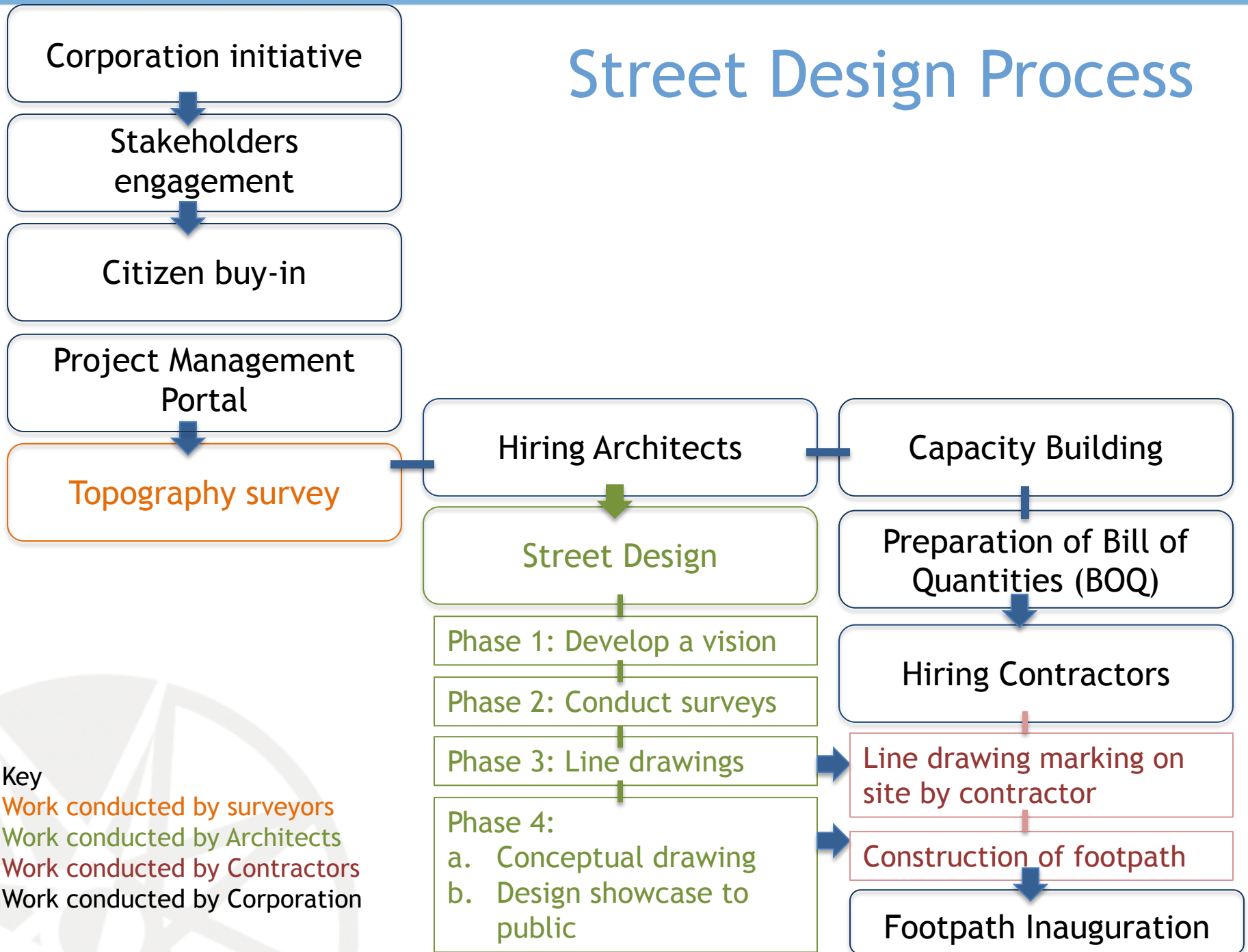
“Advanced cities are not those with highways and subways, but with dedicated spaces for walking and cycling” - Enrique Penalosa





Good footpaths are inviting spaces where people can meet, talk, sit and eat.

Street Design Process



1. Corporation Initiative

Corporations should initiate and take ownership of the ‘Street Design’ project for their city.

Process can be initiated by:

- Hosting workshops with city engineers to identify streets for redesigning;
- Attending study tours of best practise national and international examples such as Barcelona, Bogota.



Cities should conduct workshops with their city engineers to identify local streets for re-designing.



Coimbatore

Cities should also host international experts to engage with the city and get inspired.



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Street selection criteria

Street selection for re-design should be based on the following criteria:

- Stormwater drainage system is already in place;
- Important access routes for public transport;
- Streets form part of a complete pedestrian network;
- Improvement of streets that are already good
 - Latent demand
 - Attract more people
- Streets with dangerous problems
 - Blank spots

2. Corporation and stakeholders engagement

- The Corporation must engage with affected stakeholder to reach consensus on street utility and facility issues.
- These issues include shifting or removing of under/ above ground utilities; and its related costs.
- Corporation should ensure that no other major projects are to occur on the proposed street by other government agencies such as:
 - Electricity Board
 - Metro Water
- Stakeholders include:
 - Citizens Welfare Association
 - Electricity Board
 - Metro Water
 - Traffic Police
 - Environmental NGOs.

3. Citizen buy-in

Citizen engagement helps public connect with the Corporation and in turn helping Corporation better understand the citizens it serves.

Engagement with the public includes:

- Conducting meetings with the public to identify the issues they face on local streets;
- Involve the public in identifying streets that need re-designing;
- Identify their requirements, ie., cycle tracks, public toilets, street furniture etc.

Stakeholders meetings should be conducted for citizen buy-in.



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4. Project Management by Corporation

- Institutional structure must be formed within the Corporation as point source contact for external parties.
- A Project management system must be in place, where all information is documented in one portal, such as a website.
- The portal must formulate a database centre to regularly collect data and information, both from primary and secondary sources to keep city specific information up-to-date.
- All related documents, such as surveys, photos and drawings must be stored in the portal.
- Relevant parties should have access to the information at any given time.
- Corporation should set periodic meetings with relevant parties.

The following information must be stored and updated in the portal for each street:

1. Architect name and contact;
2. Corporation engineer responsible for implementation;
3. Status of street construction;
4. Number and types of utilities on the street affected by footpath construction:
 - EB box
 - Telephone box
 - Entrance gates
 - Street lights
 - Public toilets
 - Water tank
 - Police booth
 - Stormwater drains
 - Traffic lights
 - Bus stops
 - Trees
 - Parking
 - Street vending
 - Temples
 - Sunshade

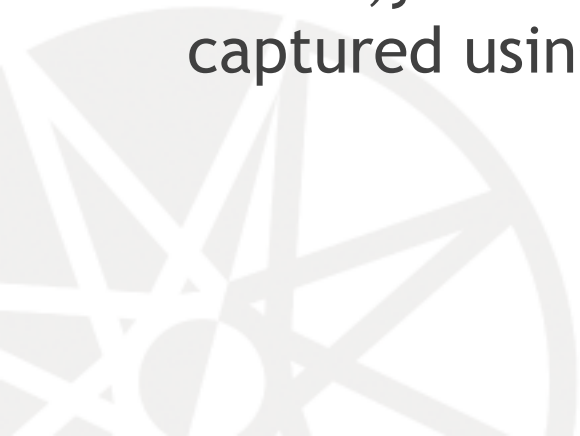
5. Hiring topography surveyors by Corporation

Conduction a topography survey of street include the following process:

1. Writing a topography survey Terms of Reference (TOR) for surveys companies to comply and bid;
2. Tendering of work;
3. Signing of work order by the Corporation;
4. Conducting surveys on ground by the survey company;
5. Training city engineer to use the survey software by the survey company.

Topography survey requirements

- Topography surveys should cover:
 - All streets in the study area
 - Intersecting streets up to a distance of 100 m from the intersection with the study area street
- Survey must cover all street elements, including curbs, paving, medians, utilities (above and under ground), trees, street furniture, street vendors, etc.
- The x ,y and z coordinates for all features to be captured using GIS.



Topographic survey example



6. Hiring of Architects/Urban Designers by Corporation

City Corporations should seek to empanel Architects and Urban Designers to prepare detailed street designs.

This process includes:

1. Writing a street design TOR for surveys companies to comply and bid;
2. Tendering of work to the empanelment of architects and urban designers;
3. Signing of work order by the Corporation.

Architects walk-about for site analysis.



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7. Capacity Building for Corporation and Architects

- The purpose is to create knowledge and enhance expertise among engineers and designers to facilitate more informed street designs.
- Training of city engineers and architects must take place by technical experts in transport planning.
- Regular workshops and seminars with international experts must be conducted to ensure the Corporation officials are up-to-date with street design standards.



Regular workshops ensure public officials are up-to-date with best practice design standards.



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8. Preparation of Bill Of Quantities (BOQ) by Corporation

- A draft BOQ must be prepared by the Corporation based on length of the street and:
 - Surface (stone or concrete)
 - Kerb (stone or concrete)
 - Raising/lowering of manholes
 - Demolition and relocation
 - Paver blocks for parking and property entrances
 - Service duct (chamber or sand fill with paver)
 - Bollards (minimum 6 per property entrance)
 - Warning tactile (minimum of 32 sqft/property entrance)
 - Dust bins, benches, street lights
 - Shifting of utility boxes (1 lakh/Box) and transformers
 - Table top crossing (1 every 300m)
 - Median construction
 - Thermoplastic paint
 - Signage

Sample BOQ

Sl No	Item	Units	North side	South side	Material
1	Footpaths	sqm	1,016	1,033	Concrete/Paver blocks/Granite
2	Parking Bays	Sqm	198	0	Paver blocks/Hollow Concrete
3	Curb stone	M	120	120	Granite/ Concrete
4	Bollards	Nos	10	20	Granite/ Concrete/ Street
5	Tree pits	Nos	9	9	Paver blocks/ Perforated concrete tile
6	Utilities Relocation	Nos	3	4	Relocation of electricity/telephone and transformers which obstruct the footpath

9. Hiring of Contractors by Corporation

Hiring of contractors to construct the footpath include:

1. Writing a TOR for contractors;
2. Tendering of work to the empanelment of contractors;
3. Signing of work order by the Corporation.



10. Street Design by Architects

Street design process is crucial for the success of the project. The procedure follows these steps:

Phase 1: Developing a vision based on existing city transport plans.

Phase 2: Conducting non-motorised transport surveys

- Land use surveys
- Pedestrian facilities and movement surveys
- Parking surveys
- Street vending surveys

Phase 3: Providing line drawings that indicate kerb line, footpath width and carriageway width.

Architects should coordinate with contractors to ensure line drawing match site markings.

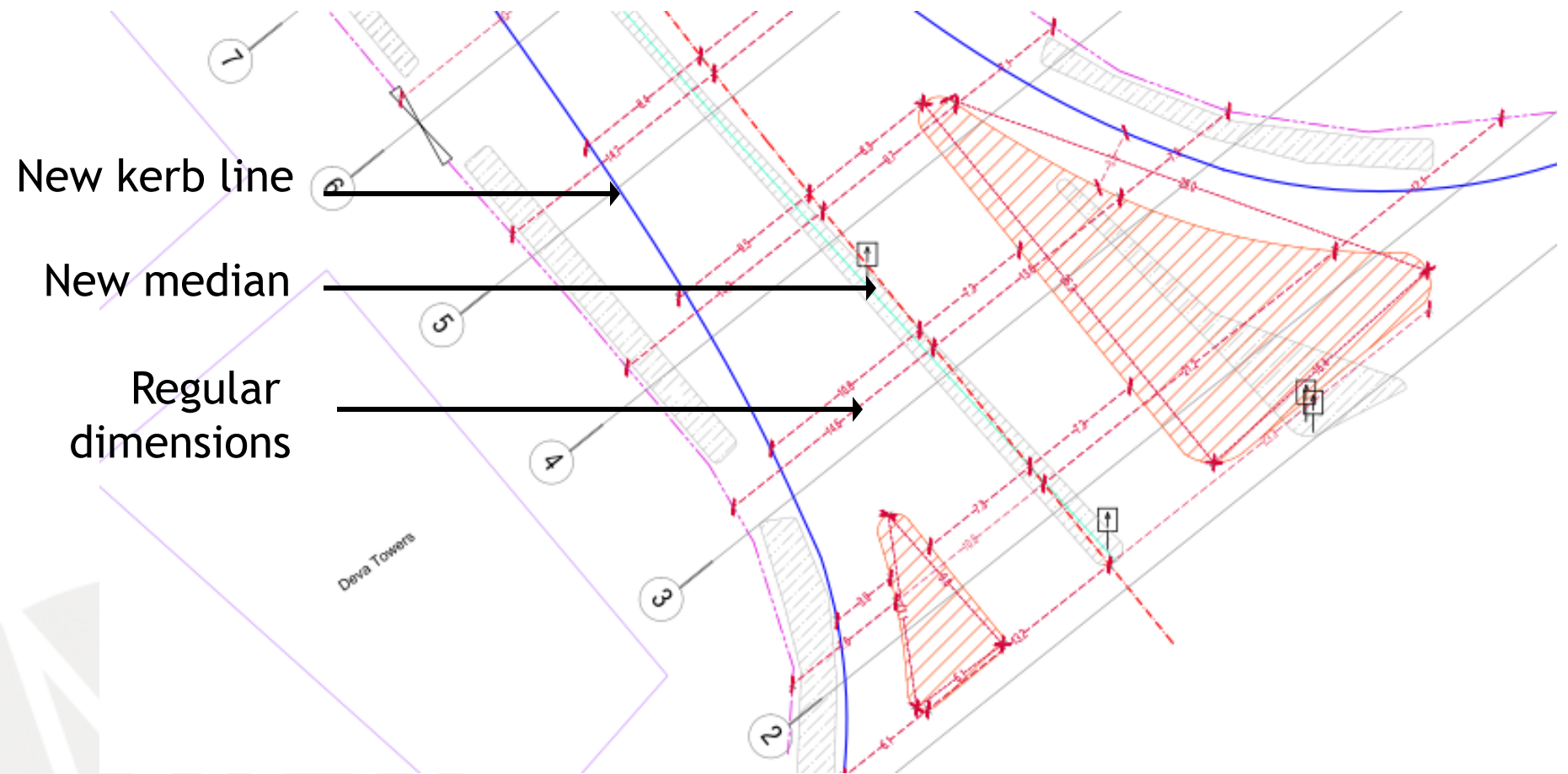
Phase 4:

- a. Conceptual drawing - The drawings should indicate all street design elements along with appropriate dimensions and detailing of above/under ground utilities.
- b. Design showcase to public - Architects must engage local residents and showcase proposed designs.

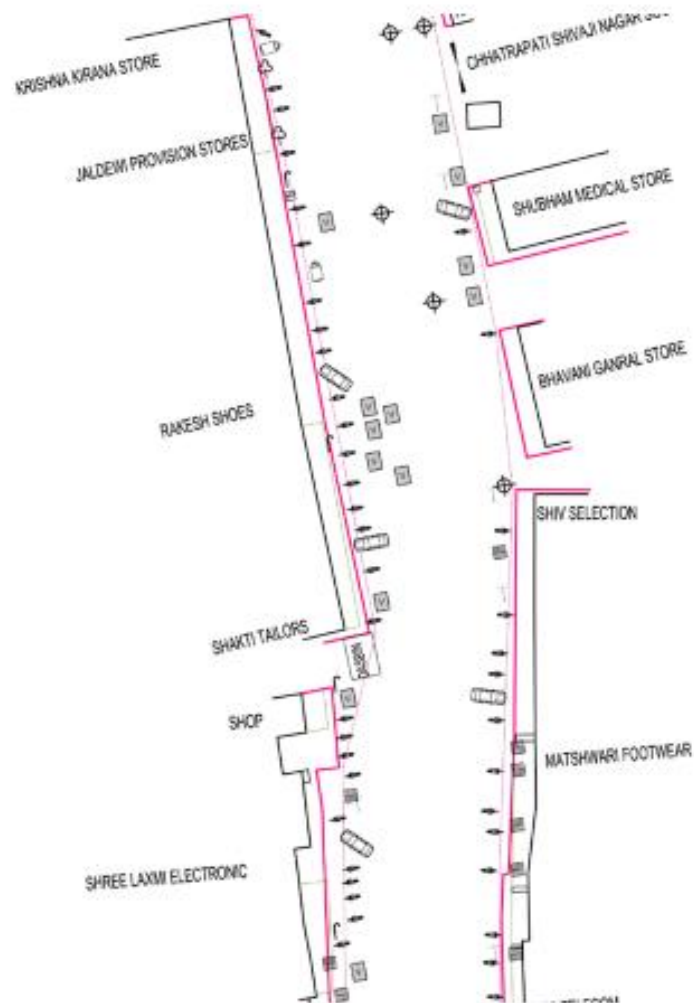
Designs must be on display (such as on hoardings) on the re-designed street for public viewing.



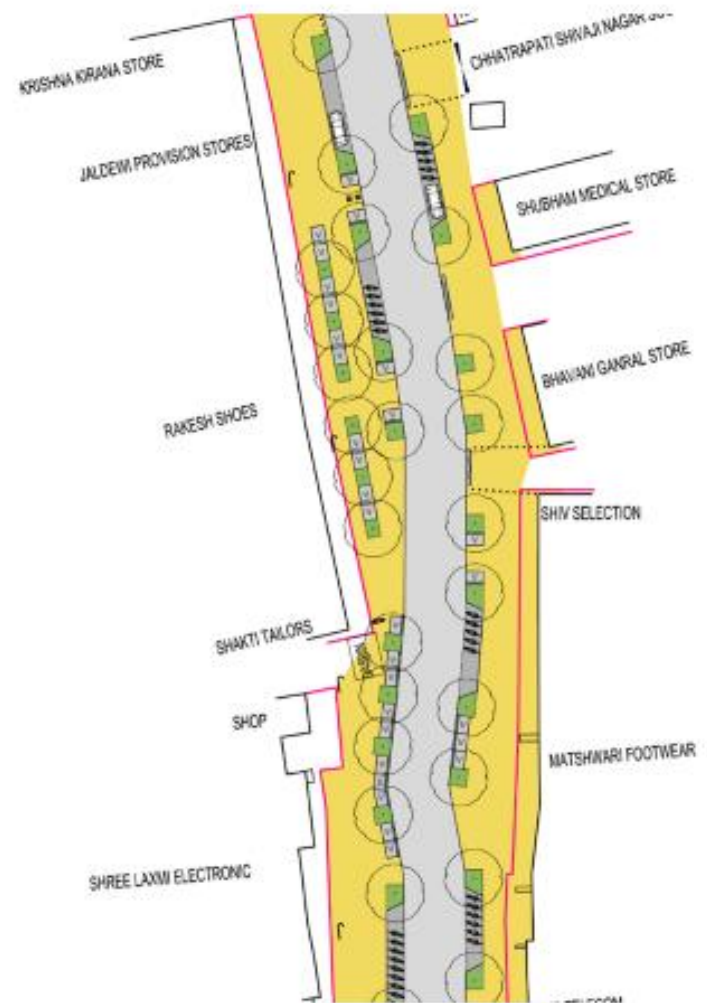
Sample of Line Drawing



Sample of Conceptual Drawing



Existing Plan



Proposed Plan

11. Execution of street design by Contractors

Parties involved during the construction stage include:

1. Relevant government agencies including the Electricity Board, for shifting/removing of utility boxes.
2. Contractors for:
 - Demolition of existing footpath
 - Digging of kerb line
 - Installing service duct
 - Raising/lowering manholes
 - Connecting stormwater drainage pipes
 - Concreting footpaths
3. Architects, to monitor the construction.



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12. Inauguration of street

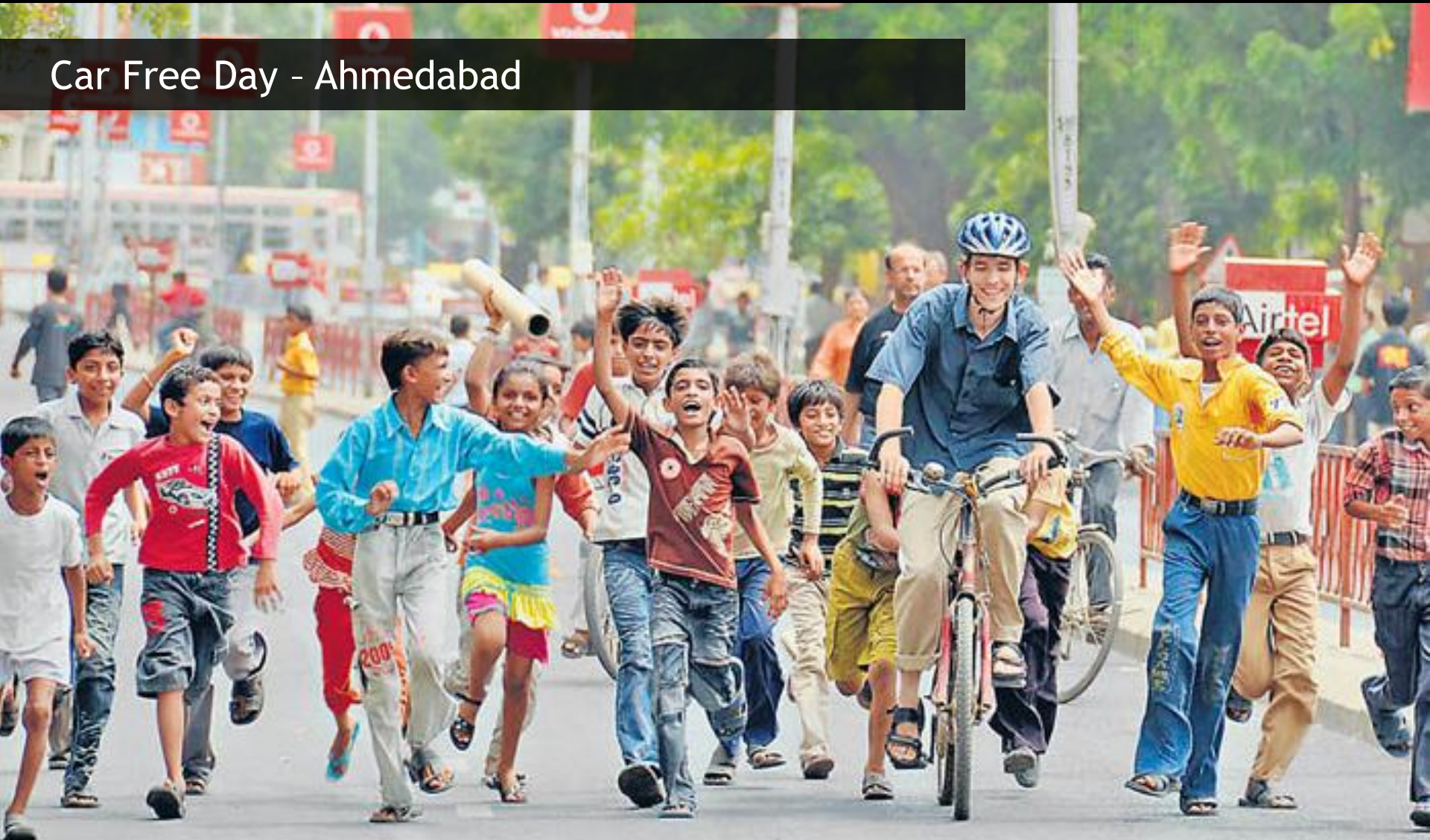
It is important to get citizens excited about wide footpaths for their comfort and convenience.

This may include:

- Hosting a 'Footpath Day' / 'Car Free Day'
- Publicizing the new footpaths in the media



Car Free Day - Ahmedabad



Ahmedabad

Project timeline

	Month									
Process	1	2	3	4	5	6	7	8	9	10
Corporation initiative	█									
Stakeholders engagement	█									
Citizen buy-in	█									
Project Management Portal	█									
Topography Surveys		█	█							
Hiring Architects/Urban Designers		█	█							
Capacity Building		█	█	█						
Preparation of BOQ			█	█						
Hiring Contractors			█	█						
Street Design Process			█	█	█	█	█			
Execution							█	█	█	█
Inauguration										█

Work by surveyors

Work by Architects

Work by Contractors

Work by Corporation

Thank you

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