Streets for People

CHALLENGE

WORKSHOP 4

Guide to make a successful design submission for the design competition - W4

Templates & guides

ITDP India Programme

Smart City
MISSION TRANSFORM NATION

Ministry of Housing and Urban Affairs
Government of India

FIT INDIA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Making a successful design submission

A. Develop a vision

B. Get the basics right in design

C. Detail-out the proposal

D. Communicate your proposal

A. DEVELOP A VISION

- THINK BIG
- THINK AS WHOLE
- THINK CONTEXTUAL

THINK BIG

Set your vision for the site **based on the aspirations of the city and community**.
Do not be limited by the constraints of present situation.

Reimagine the future.

Eg: Cheonggyecheon, Seoul

The vision to transform the downtown with a 10.9 km long public space emerged from the aspiration to prioritize people, and was not limited by the existing elevated carriageways.

THINK AS WHOLE

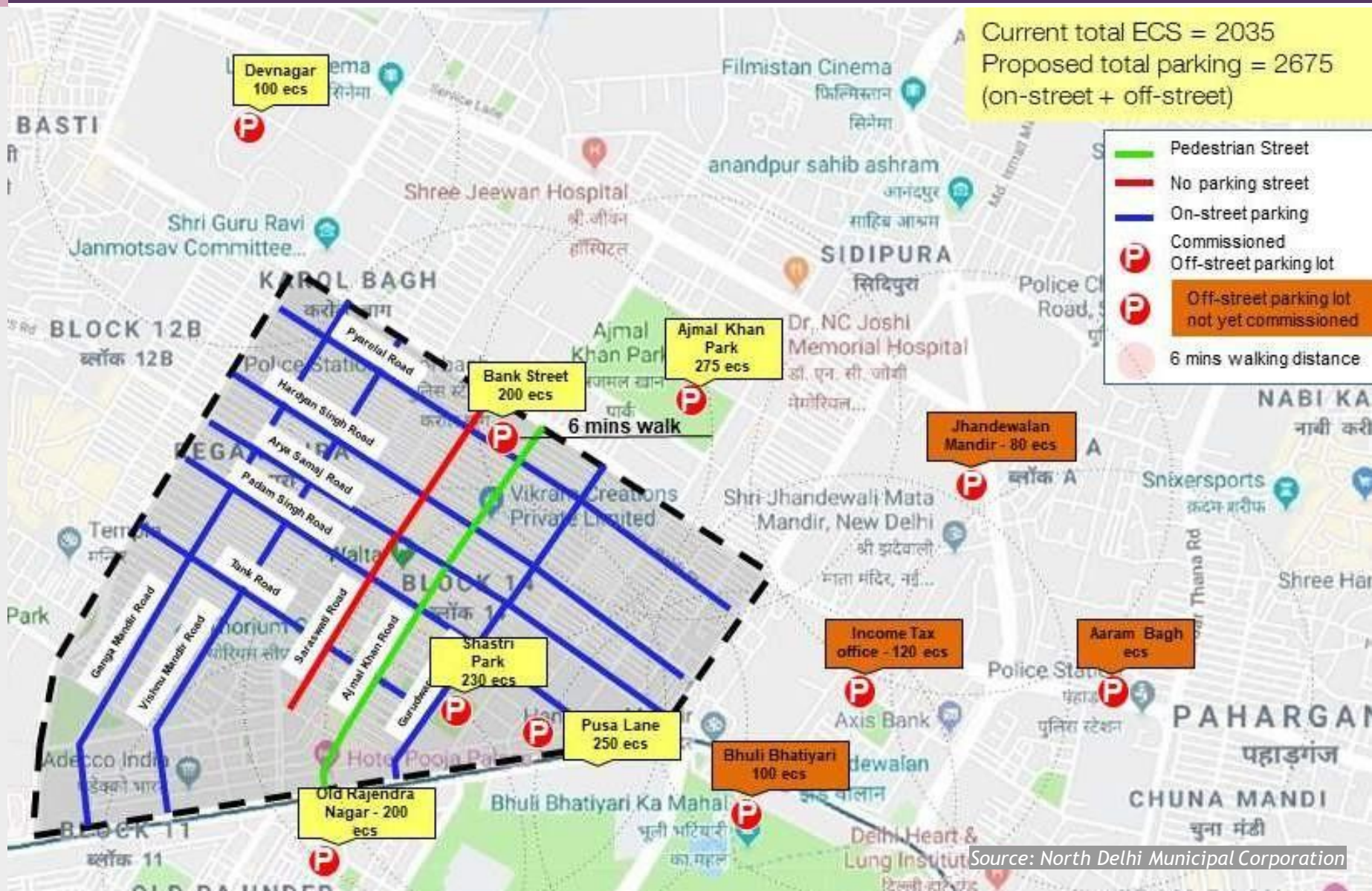
Embrace an area-based approach with strategies for holistic planning.

Understand the impact of any interventions on your site and **think comprehensively.**

Eg: Karol Bagh, Delhi

The pedestrianisation of Ajmal Khan Road, has led to reimagination of the entire neighbourhood.

Improvements included multi-modal integration, parking & vendor management, etc.



THINK CONTEXTUAL

The design proposal should be **strongly rooted to the local site context.**
Respond to the heritage value, natural features, land use mix, etc

Eg: Amritsar, Golden Temple

The redevelopment reflected the historic design language in material choice, inclusion of art, statues, and other features.

Tourists were recognised as key stakeholders and basic amenities were provided

B. GET THE BASICS RIGHT

- REIMAGINE STREETS AS PUBLIC SPACES
- PRIORITIZE PEOPLE WHILE PLANNING
- ENSURE UNIFORM CARRIAGEWAY WIDTH
- CREATE COMPACT INTERSECTIONS
- MANAGE PARKING

REIMAGINE STREETS AS PUBLIC SPACES

Design the **streets** not only as conduits for movement, but **as places to sit, rest, play, and socialize.**

- Reclaim spaces by using bright paint, planters, shade, and seating. It invites people to spend time on the street and makes it safe for all!
- Respond to the needs of all irrespective of age, gender, physical ability, and socio-economic status.

Source: Cork Beo

Look at quick, innovative and low-cost interventions

Via placemaking physical elements

Source: ITDP Brazil

Via re-programming existing activities

Source: NACTO - GDCI

By introducing new programmes

Source: The Tribune India

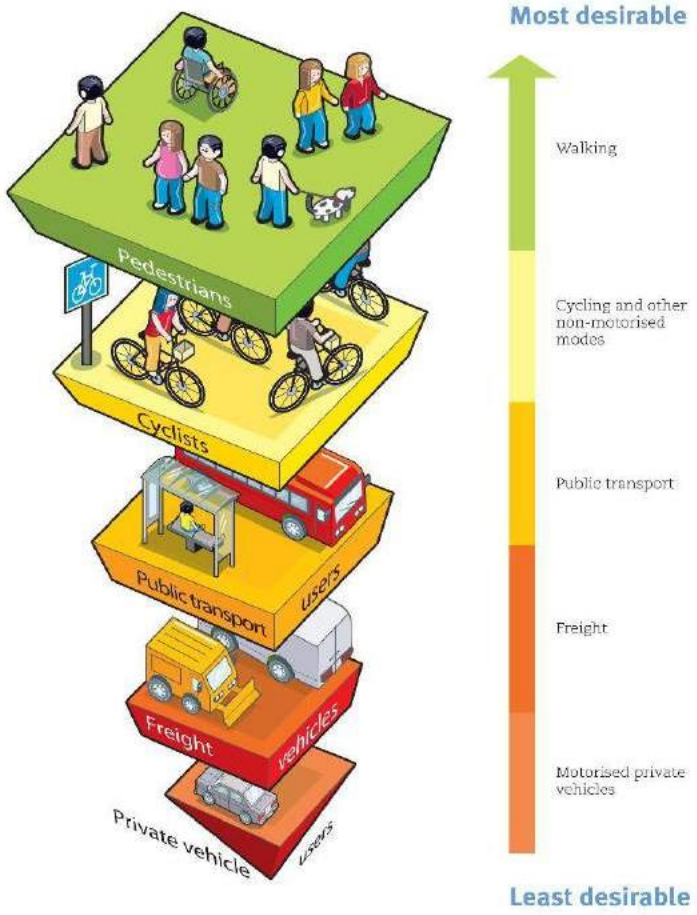
By hosting campaigns and events!

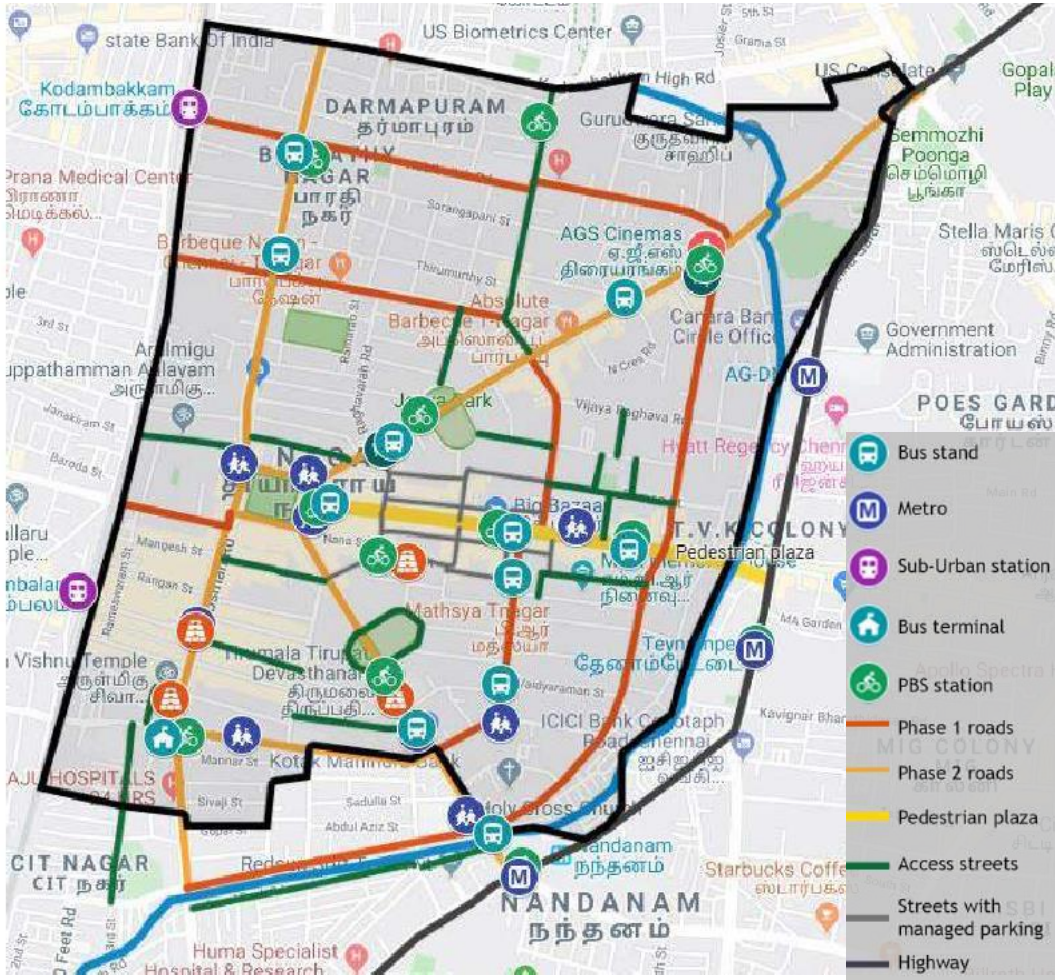
Source Equal Streets Bandra

PRIORITIZE PEOPLE WHILE PLANNING

Prioritize the movement of people over motorized vehicles through planning strategies.

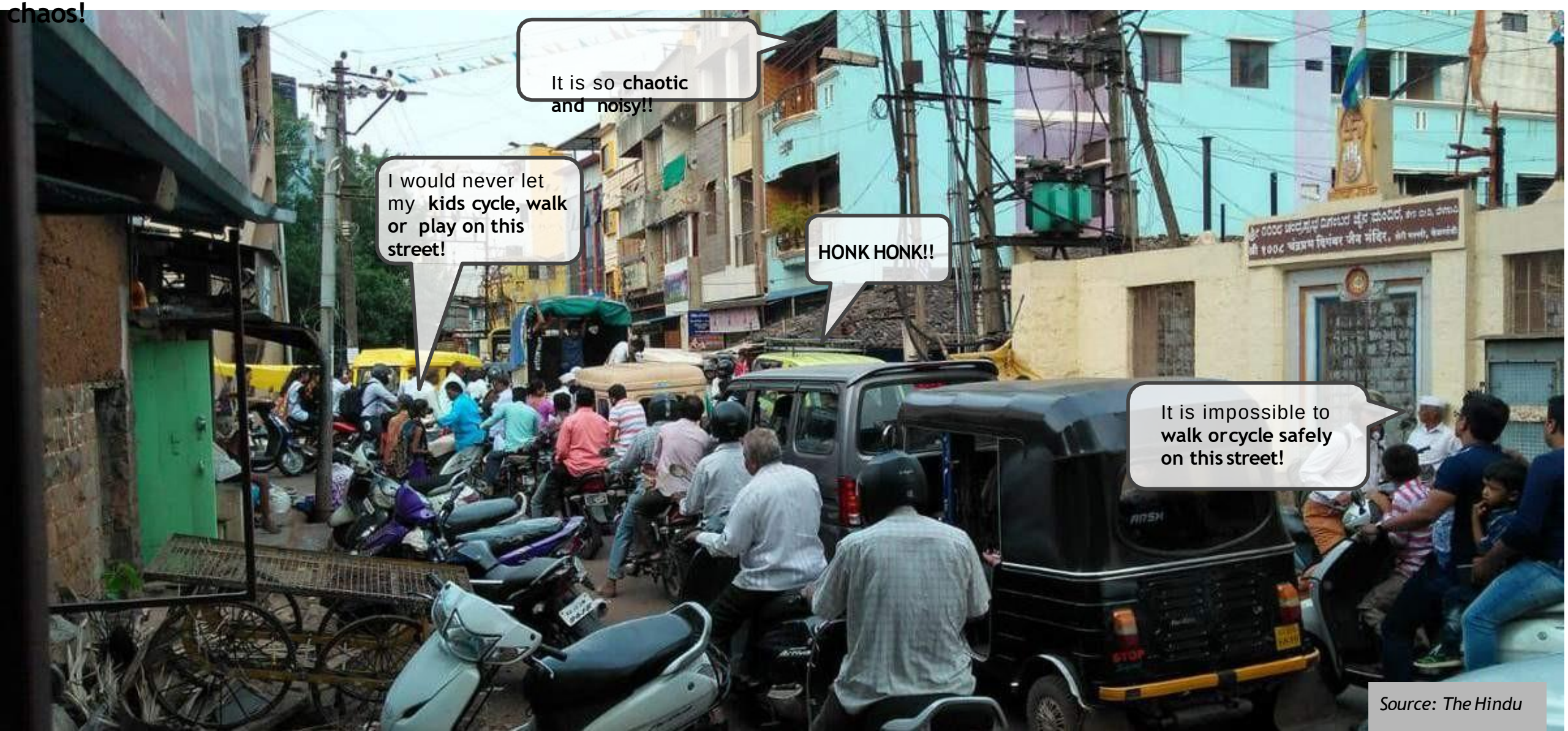
- Develop the larger network for walking and cycling.
- Identify street segments/ areas for complete or partial pedestrianisation.
- Propose strategies to manage vehicular traffic.
- Ensure the access is not restricted for local residents and emergency vehicles.
- Create shorter networks





Identify the streets which **permit unwanted traffic...**

Streets that allow **unwanted traffic to cut across** the neighbourhood creating **traffic chaos!**



Source: The Hindu

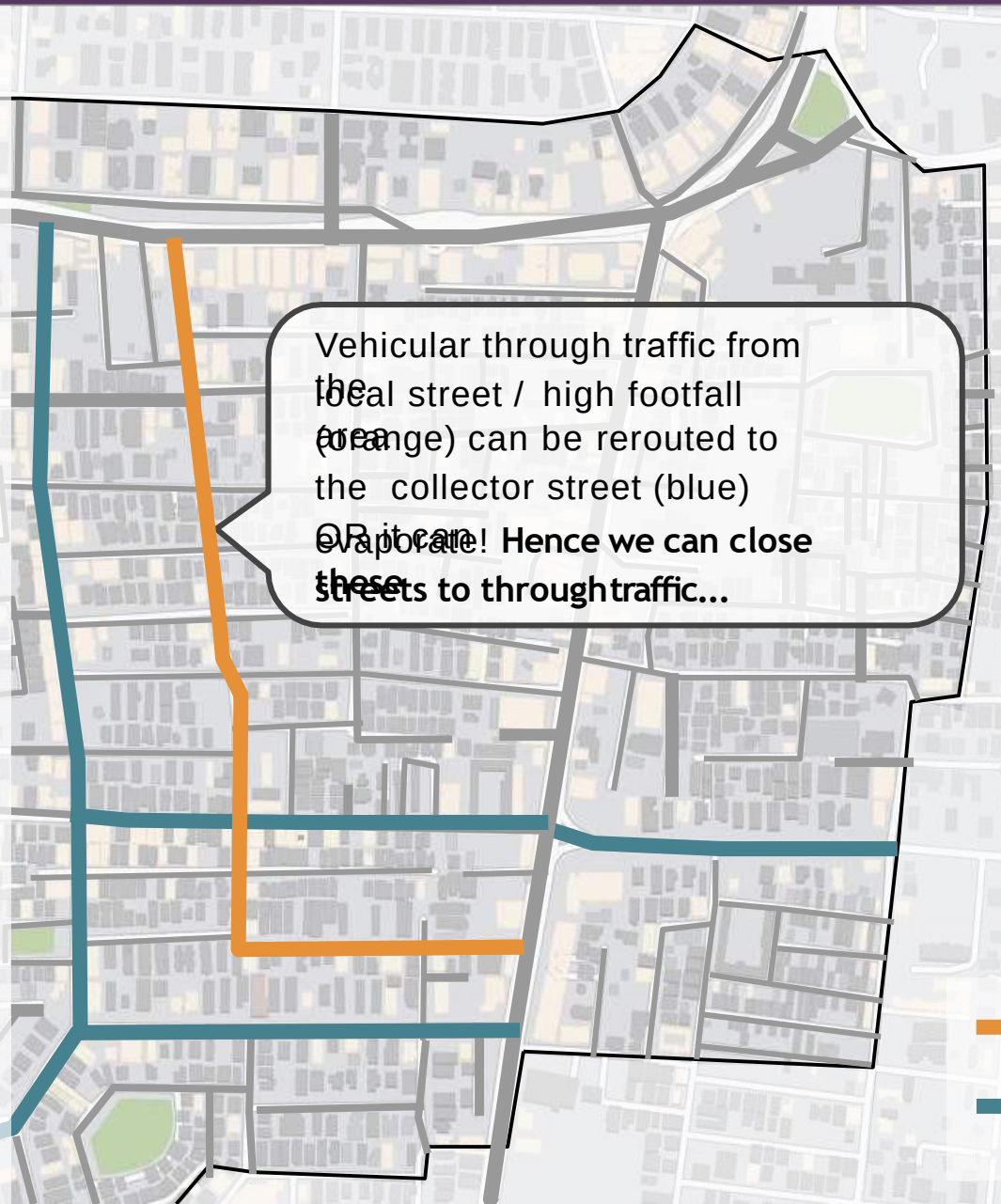
Also, identify the streets with high pedestrian footfall...

Streets that are **busy and dominated with pedestrian activity**, yet allowing vehicular vehicular traffic in an unsafe manner!

Strategically close these streets to unwanted traffic…

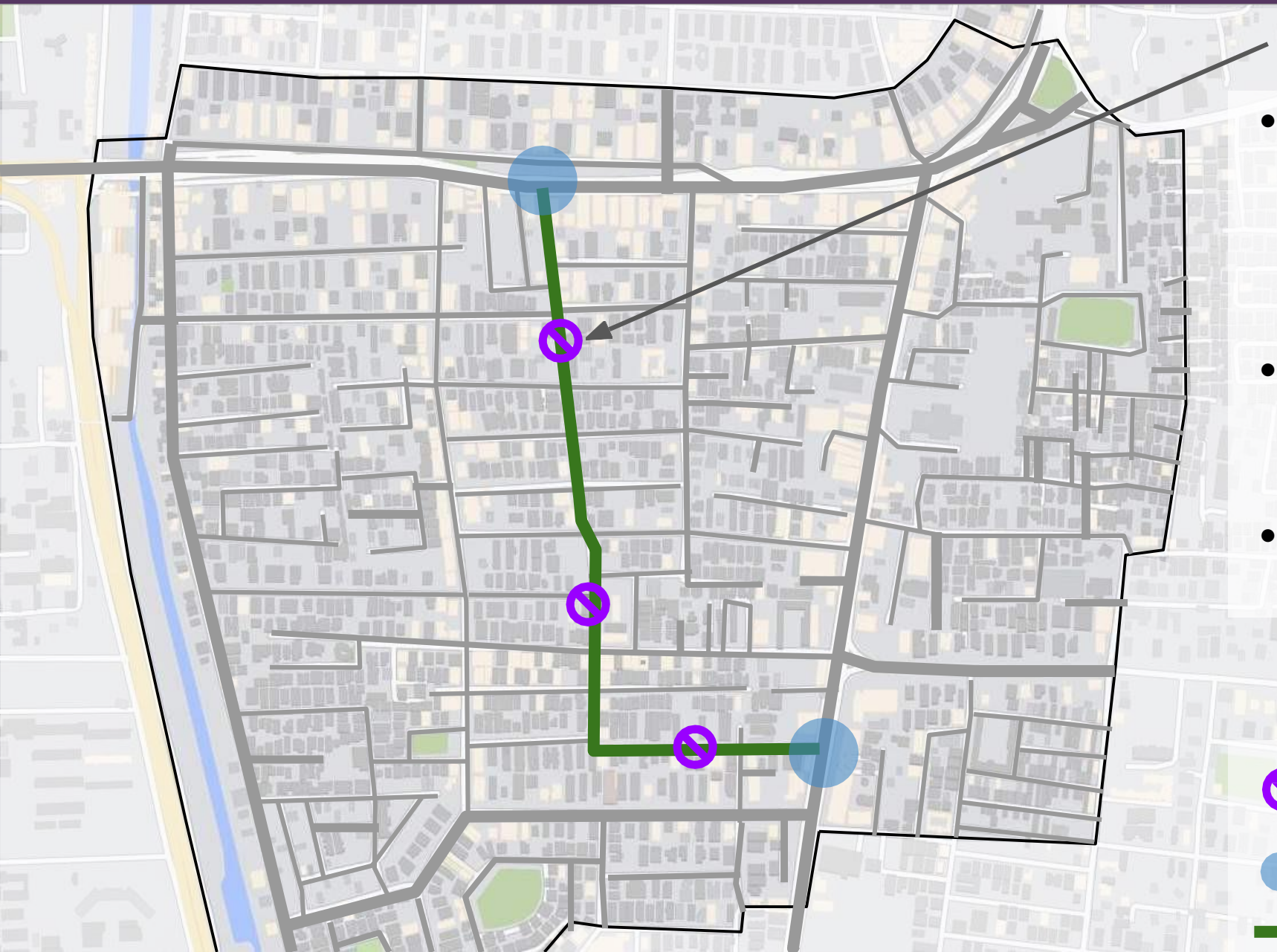
How traffic evaporates!

When cycling and walking are made safe and convenient —*and driving inconvenient* — people often skip the car and **choose to cycle or walk instead, especially for short trips.**



- Identify **the local streets/high footfall areas that permit vehicular through movement**
- Map the streets that are **frequented by unwanted traffic through walking audit and talking with local stakeholders.**
- **Assess** whether the through traffic can be closed for that street

Choose the right point on the street to close



- **Filter the traffic a few blocks inside the neighbourhood** so residents can enter the neighbourhood but outside vehicles can not cut across it.
- Do not close **key routes used by the residents** to enter and exit the neighbourhood.
- Do not close routes used by **emergency vehicles** i.e. ambulances, fire fighting trucks etc.

Bollards / planters to stop thoroughfare movement

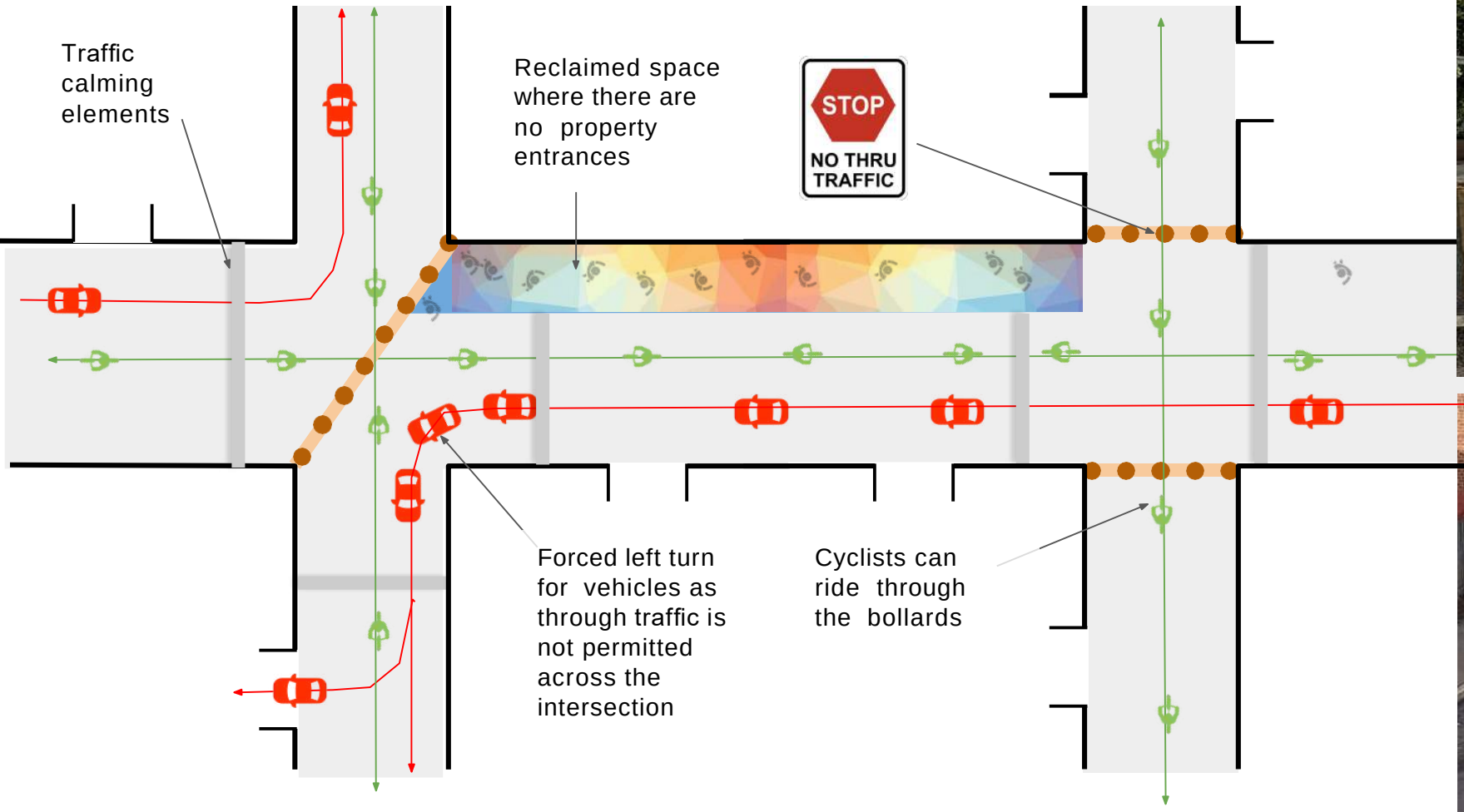
Sign: No through traffic

Street with filtered traffic

Bollards can be placed in multiple

Filtering traffic at intersections
Reducing unwanted through traffic in both directions

Filtering traffic at intersections
Reducing unwanted through traffic in one direction



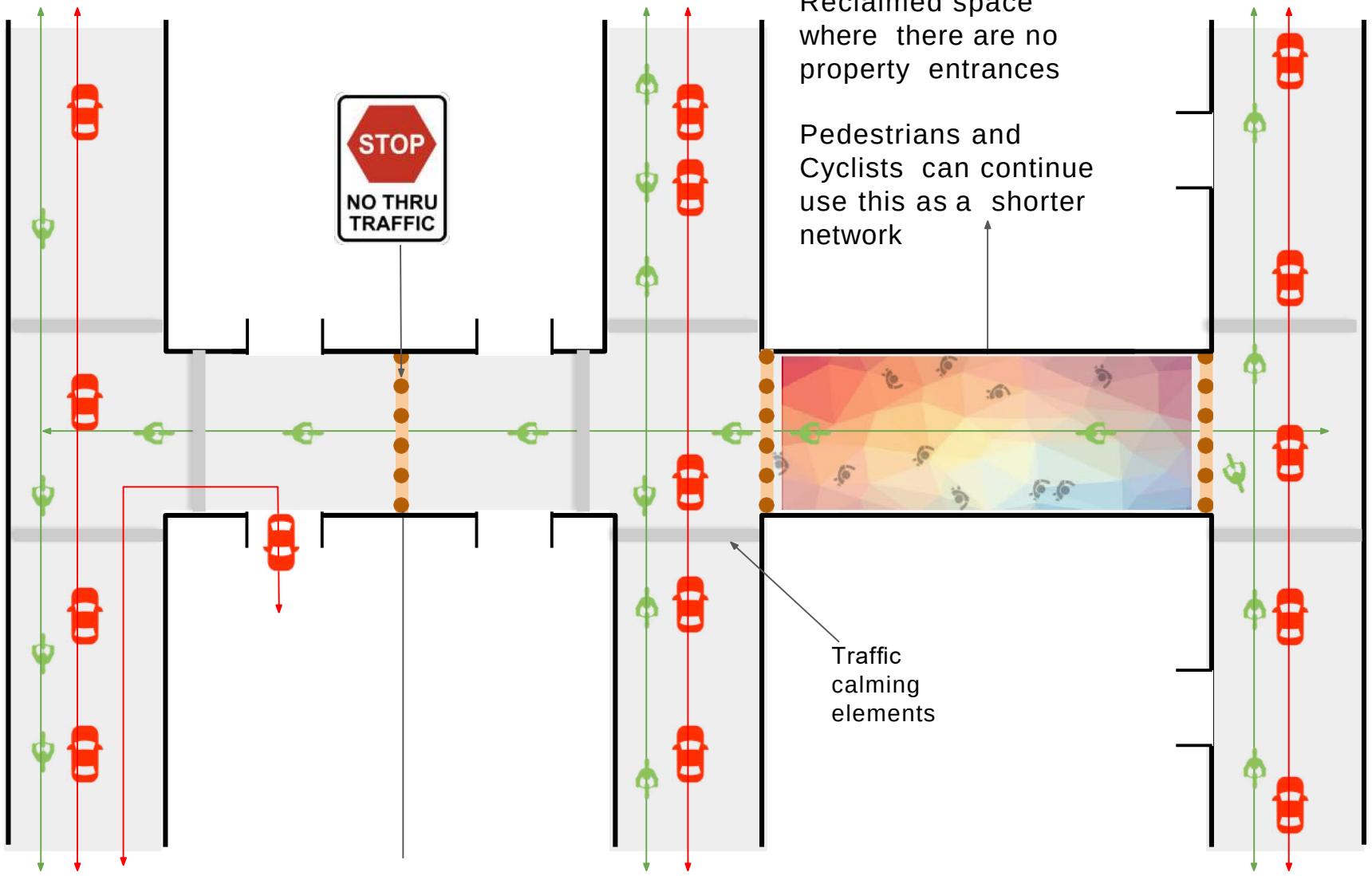
Residential vehicular traffic

Source: BBCC

Source: Air quality news

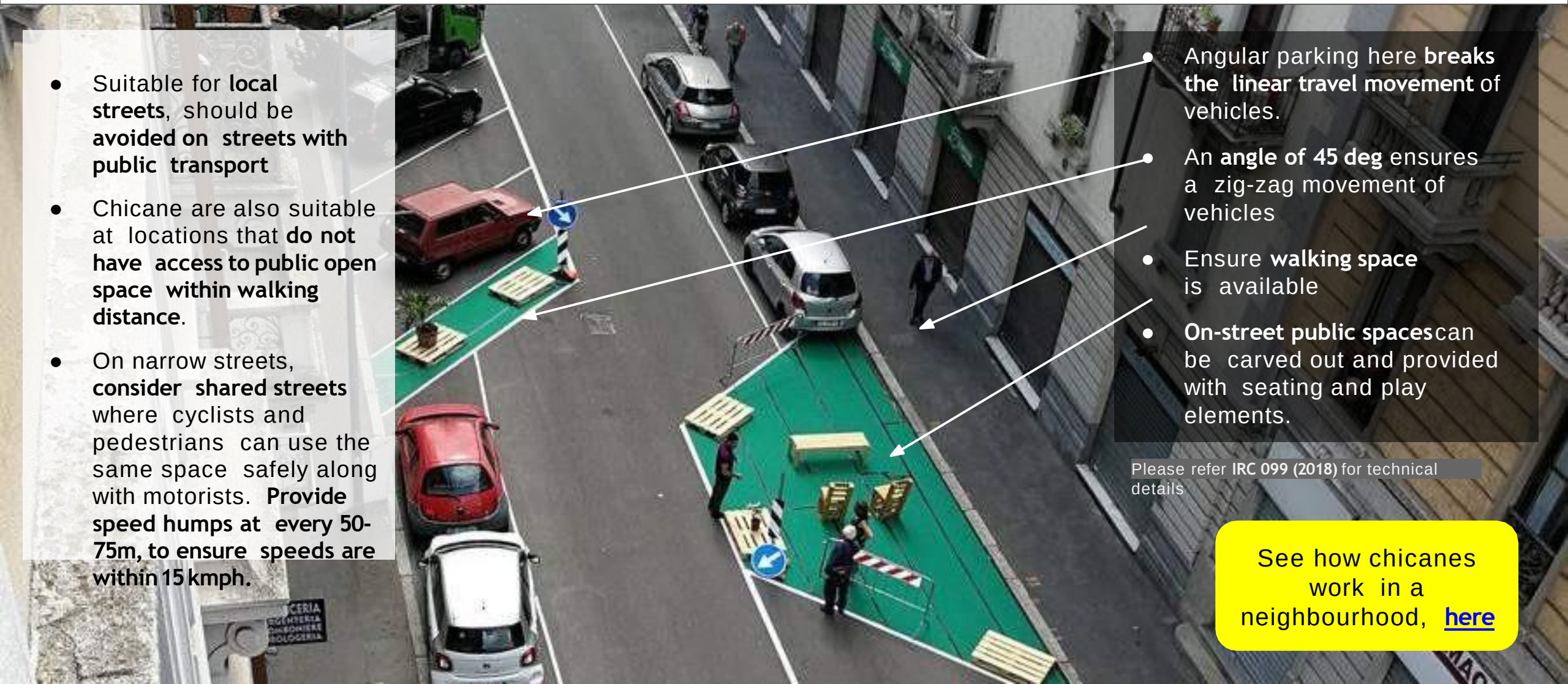
Bollards can be placed in multiple

Filtering traffic at mid-blocks



Introduce Chicanes and reclaim street space as public pockets...

Chicanes are **angular deflections** created in streets. This can be created by **strategically placing diversions** in the form of bollards, planters, traffic cones, parking etc.



- Suitable for **local streets**, should be **avoided on streets with public transport**
- Chicane are also suitable at locations that **do not have access to public open space within walking distance**.
- On narrow streets, **consider shared streets** where cyclists and pedestrians can use the same space safely along with motorists. **Provide speed humps at every 50-75m, to ensure speeds are within 15 kmph.**

- Angular parking here **breaks the linear travel movement** of vehicles.
- An **angle of 45 deg** ensures a zig-zag movement of vehicles
- Ensure **walking space** is available
- **On-street public spaces** can be carved out and provided with seating and play elements.

Please refer **IRC 099 (2018)** for technical details

See how chicanes work in a neighbourhood, **here**

Redesign the reclaimed space with **exciting and colourful interventions**

Streets that do not allow through-traffic can be **repurposed for better walking, cycling and liveability elements.** This allows residents to enjoy the street space and make it safe for all.

Further, you can create new walking and cycling linkages!

Cyclists and pedestrians prefer shortest routes. Large urban blocks increase cycling and walking distance, and can discourage one to cycle or walk.

Identify walk and cycle-only thoroughfares through large campuses, institutions, office complex, parks etc.

1. In proposal, **identify relevant stakeholders** to seek permissions for such thoroughfares.

2. Clearly **state the implications of making new linkages** accessible

3. **Detail out the design** to ensure the linkage is only for walking and cycling

4. City officials can facilitate discussions with the stakeholders for implementation.

NMT link through Park (Conceptual), Erode, India

ENSURE UNIFORM CARRIAGEWAY WIDTH

A street with varying carriageway width along its length will allow more vehicles to accumulate in the wider portions and lead to bottlenecks.

Maintain '**one street, one carriageway width**' to resolve bottlenecks.

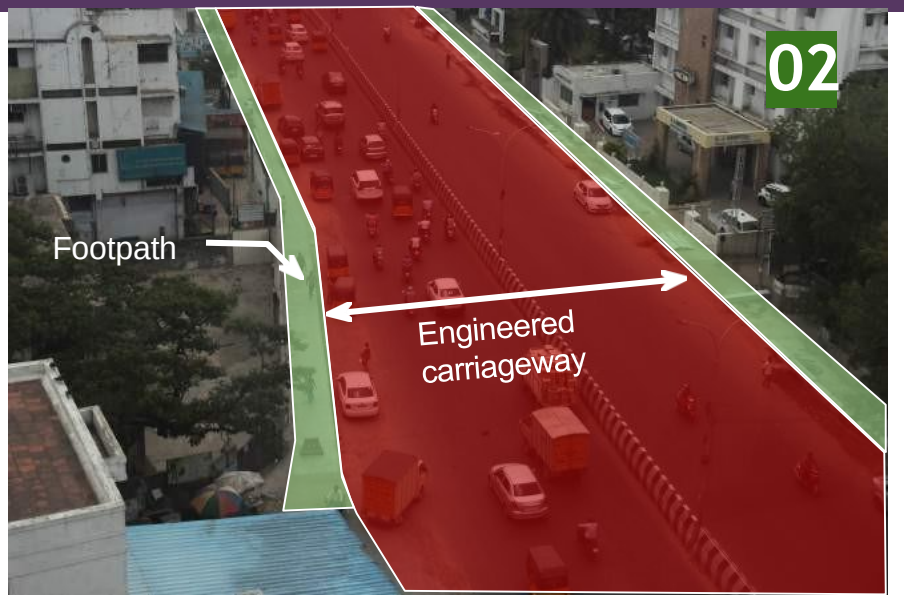
Varying carriageway widths allows overtaking and wrong-side driving

Uniform carriageway width ensures streamlined motor vehicle flow and reduced congestion

Let’s take a look at how the carriageway can be optimized

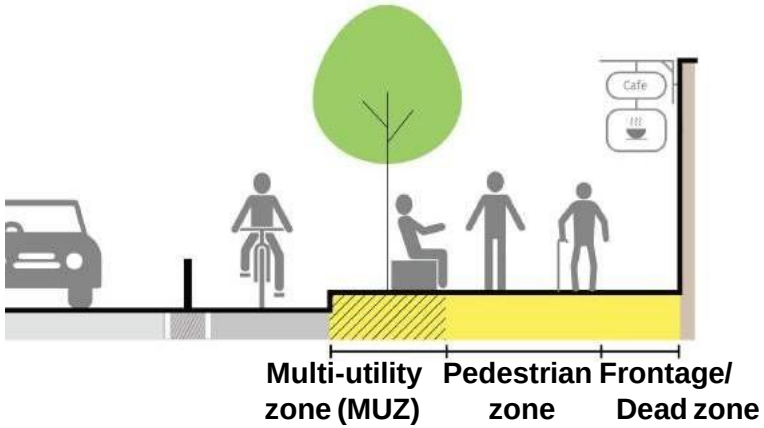
01. Existing scenario
02. Present status of footpath & engineered carriageway
03. Begin from the centerline and mark uniform carriageway with max width for one lane as 3.25m

04. Reclaim the space along both the edges to accommodate pedestrians, cyclists, and Multi-use zones.



Let's take a quick look at some footpath design basics!

Footpath design

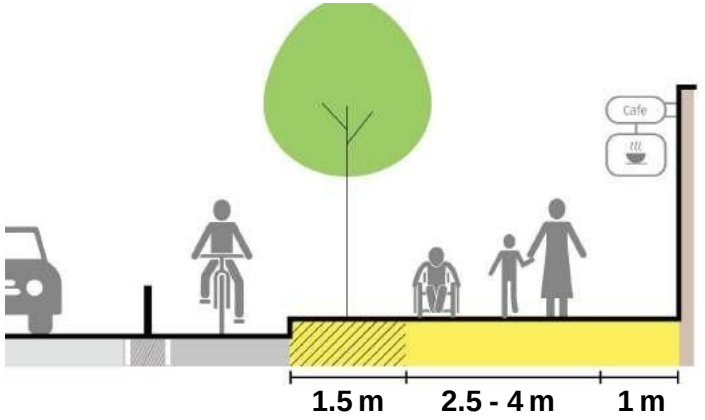


Pedestrian/Walking zone: Continuous walking space for pedestrians, clear of any obstructions.

Frontage/dead zone: Provides a buffer between the pedestrian zone and the property edge.

Multi-utility zone (MUZ): Space for vending, street furniture, landscape, bus stops, and property access ramps, on-street parking.

Footpath in commercial areas

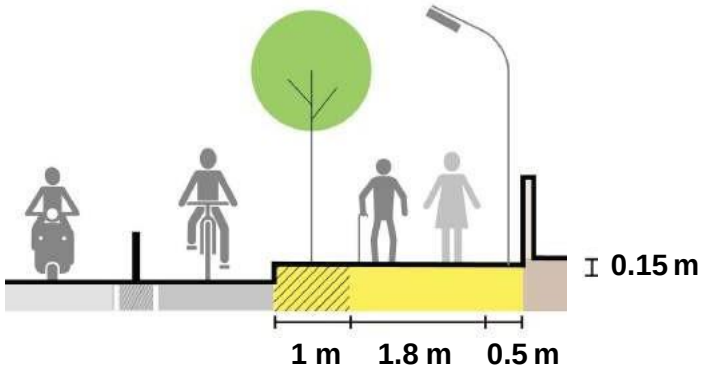


Clear width of the pedestrian zone in a commercial area should be at least **2.5 m.**

In case of high intensity commercial areas the pedestrian zone width should be at least **4 m** to accommodate high pedestrian footfall.

1 m frontage zone along shops ensures shoppers do not hinder the pedestrian movement.

Footpath in residential areas



Clear width of the pedestrian zone in a residential area should be at least **1.8 m** for two wheelchairs to pass each other.

On narrow streets, MUZ can be reduced to 0.5m.

Footpaths should be raised but no more than **0.15 m**.

Source: IRC:103-2012

CREATE COMPACT INTERSECTIONS

Let’s take a look at **how to make an intersection compact**

Compact intersections allow for efficient and safe use of road space, with more room for street furniture to liven up the junctions.

Poorly designed geometry, wide free left turn, lack of pedestrian crossing, lack of traffic signal management, etc. are the few common threats in intersections.

Do not miss out to address them in your design proposal.

Source: The trentorian

Step 1- **Create a**

Mark existing physical elements:

Existing **carriageway**

Existing **median**

Existing **trees**

Existing **footpath**

Mark existing activities:

Pedestrian movement and counts

Vehicular traffic movement and PCU* counts (15 minute on peak hours)

Cyclist movement and counts

Vending

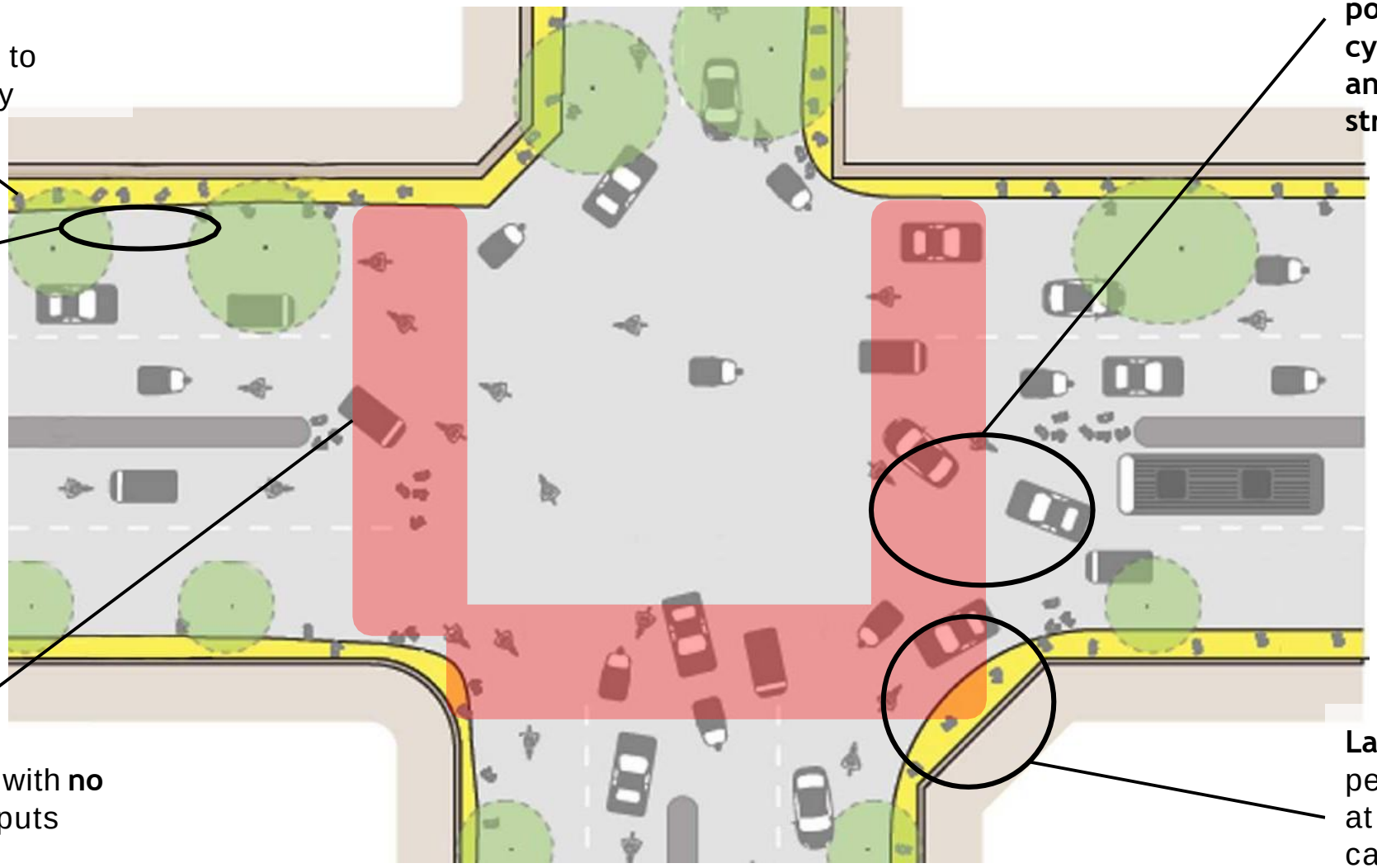
Parking

*PCU: Passenger car units

Step 2 - **Identify the pain points**

Narrow footpath forcing pedestrians to walk on carriageway

Area between the trees may used as **haphazard parking**



Possible **conflict points between cyclists turning right and vehicles going straight**

Unprotected crossing with **no refuge in the median** puts pedestrians in grave danger

Large turning radii that permit vehicles to turn at high speeds and cause danger to pedestrians and cyclists.

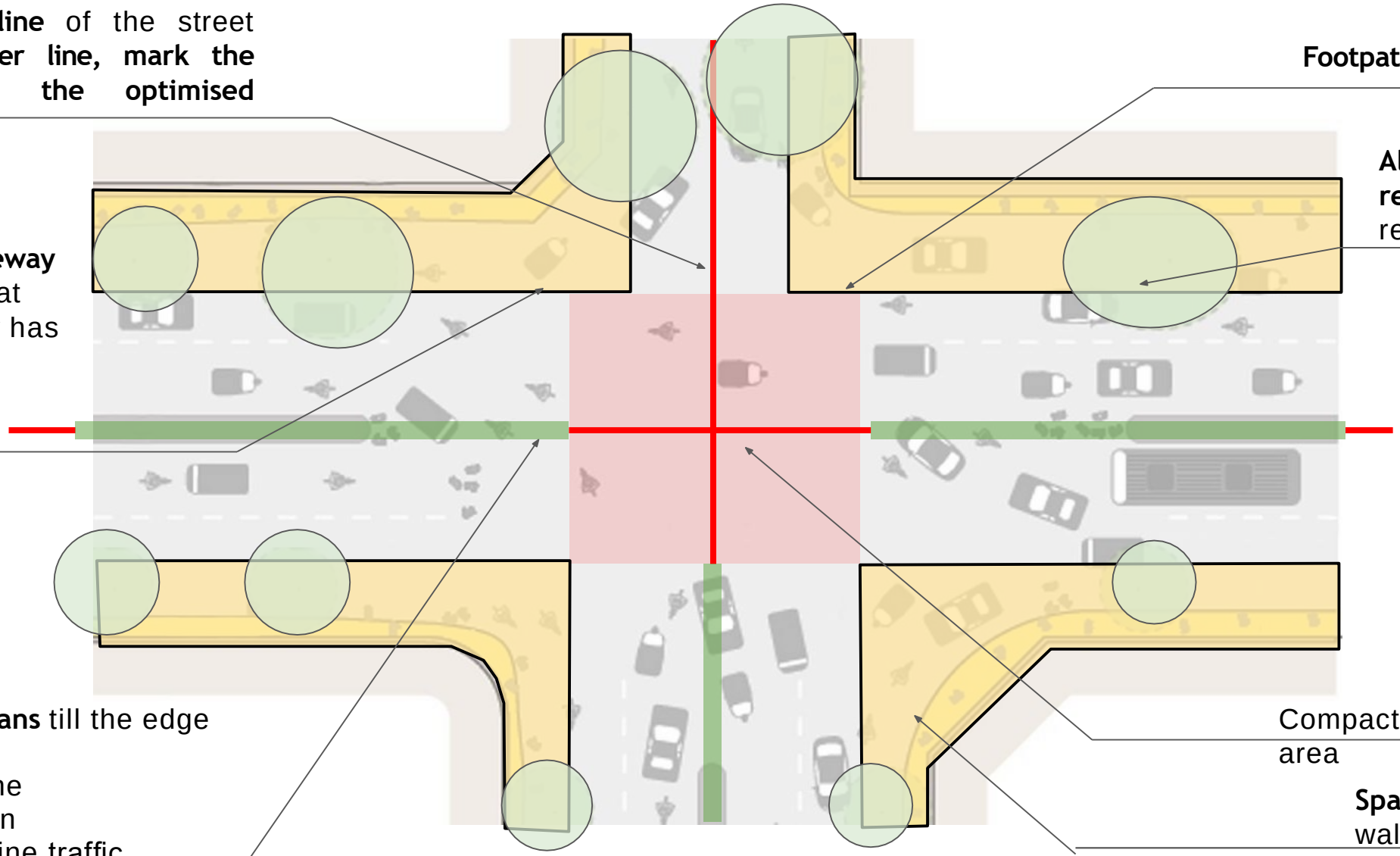
Step 3 - Make the intersection compact

Identify centre line of the street **from the center line, mark the median and the optimised carriageway line**

Optimise carriageway width. Ensure that the carriageway has **consistent** width across the intersection.

Extend the medians till the edge of the intersection area

- To make the intersection compact
- To streamline traffic flow



Footpath lines extended

All trees should be retained while redesigning

Compact intersection area

Space reclaimed for walking and cycling

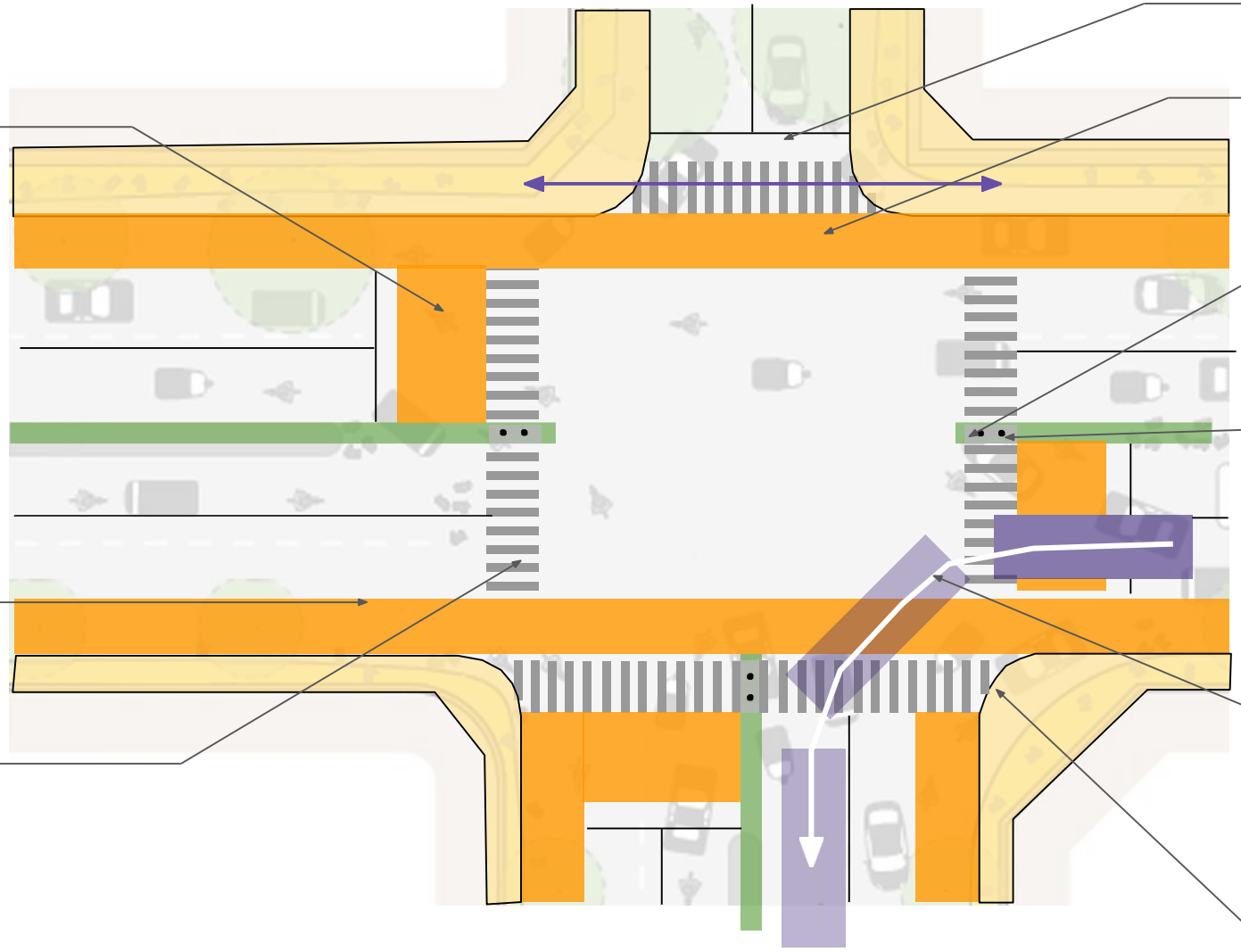
Step 4 - **Detail out the intersection**

Bicycle box allows cyclists to queue in front of motor vehicle traffic and make safer turns

Bicycle box width : 3-5m

Cycle lanes standards:
One-way lane - min 2m
Two-way lane - min 3m Buffer - 0.3 - 0.6 m

Pedestrian crossing width: minimum **2.4 m**



Stop line: **300 mm** from pedestrian crossing for vehicles to maintain a buffer

Mark crossing where pedestrians would naturally desire to cross

Median refuge
Create protected refuge islands for pedestrians to wait safely at the median

Bollards in median refuge.
The spacing between bollards should be 1m to allow disabled access

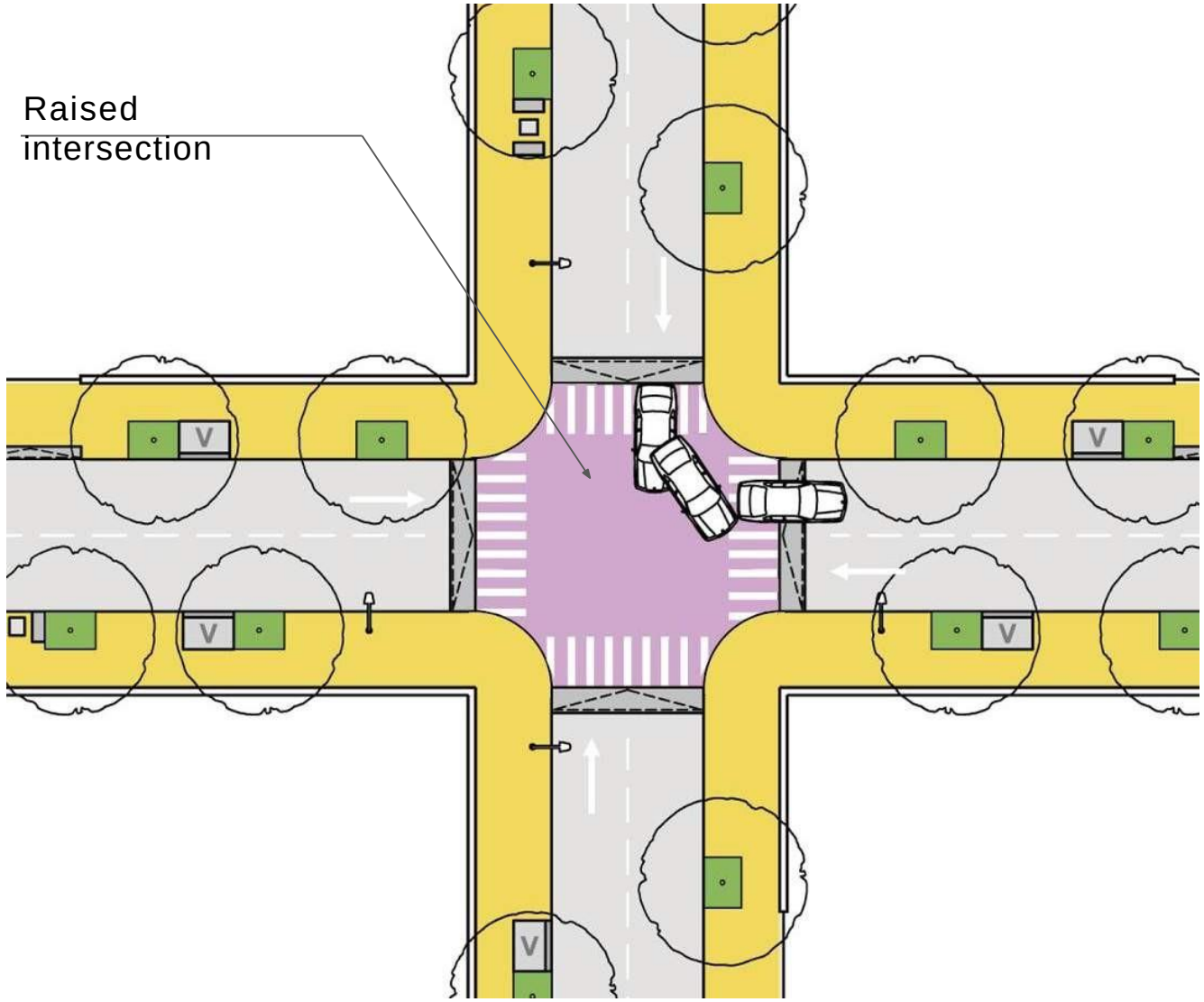
Due to the addition of the cycle lane, the **path travelled by the vehicles** while turning at the intersection would be **larger than** the provided **turning radius of the footpath.**

Hence, turning radius at the footpath should be 6 m or less. When the radius is smaller, vehicles slow down, making it safer for cyclists and pedestrians to cross.

Design for small intersections

Raised intersection in neighbourhood streets

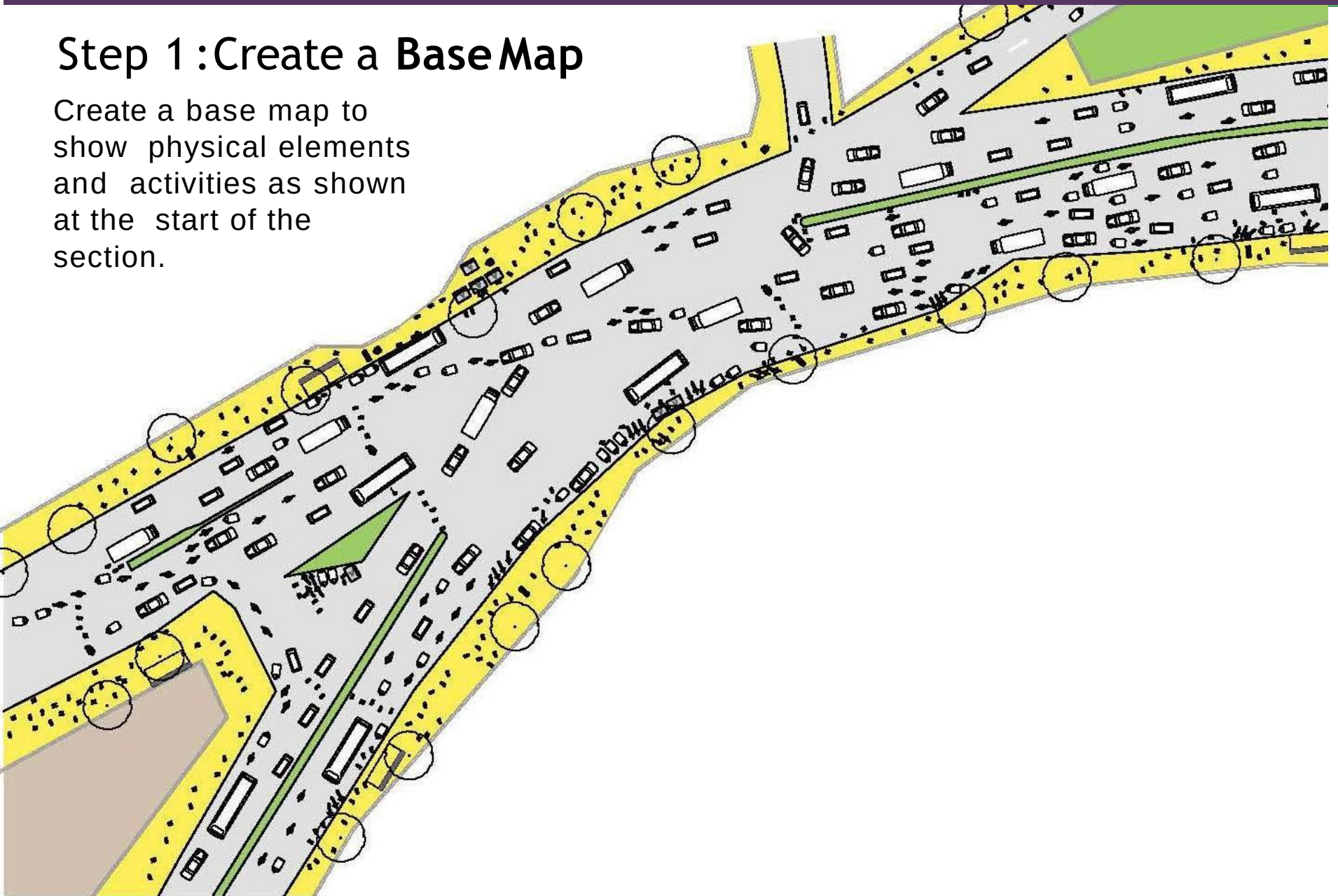
In case of narrow streets where protected cycle lanes cannot be provided, the intersection can be raised to **calm the traffic and enhance safety for cyclists.**
Intersection can be **raised to the level of the footpath** (+150 mm). However, **bollards and variation in paving material/colour** should be employed to demarcate and protect the footpath.



The same steps apply to a more complex intersection!

Step 1: Create a **Base Map**

Create a base map to show physical elements and activities as shown at the start of the section.



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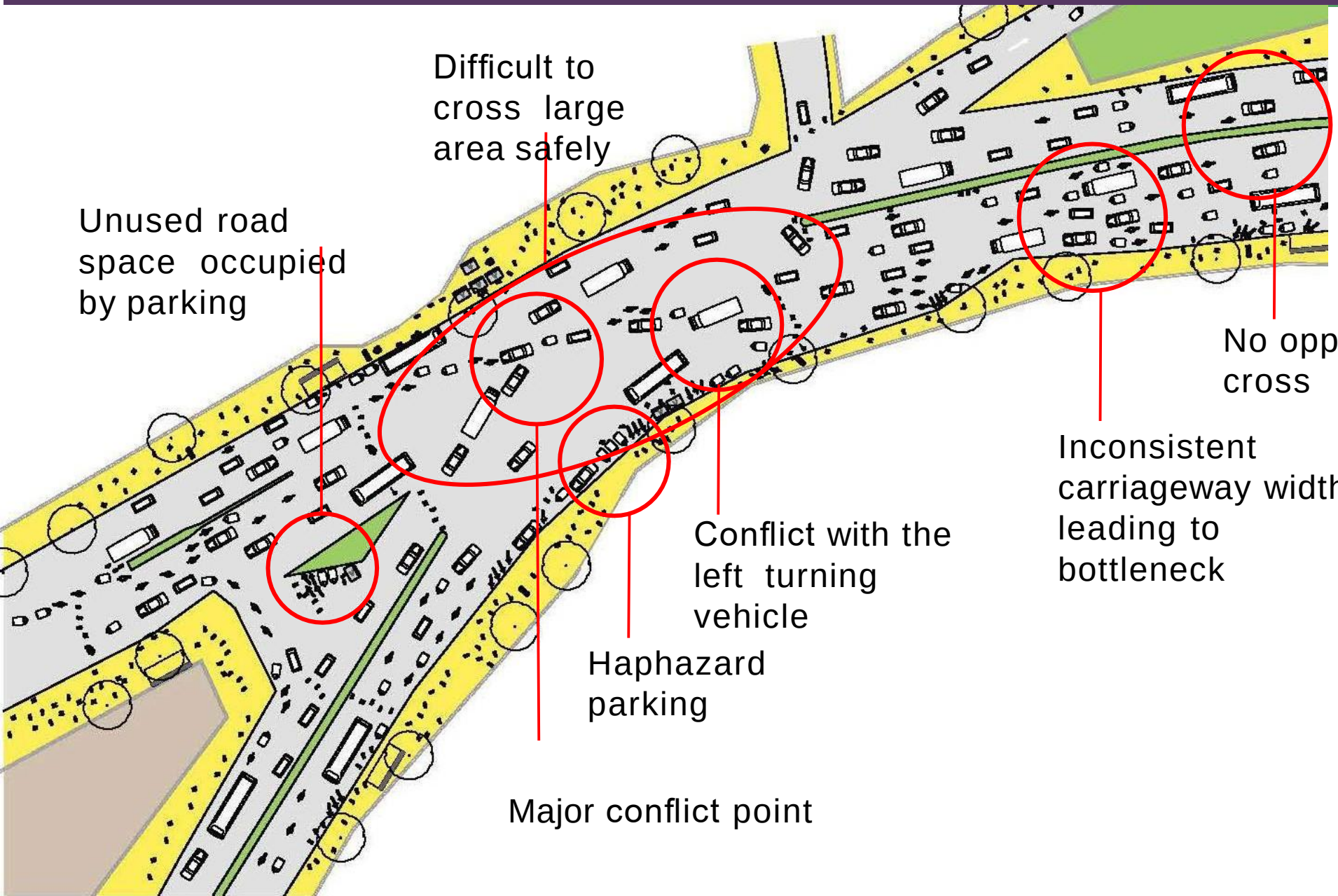
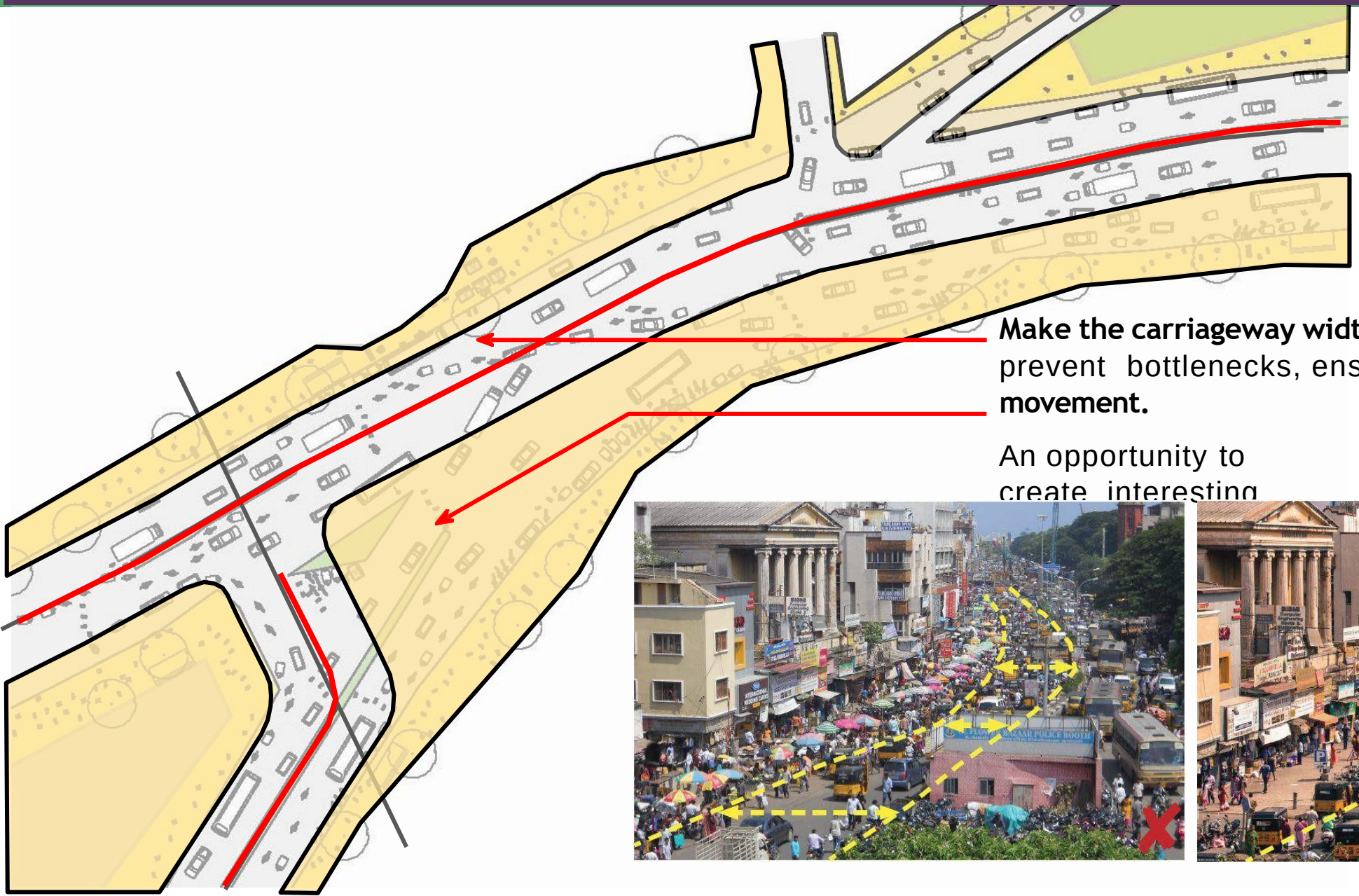
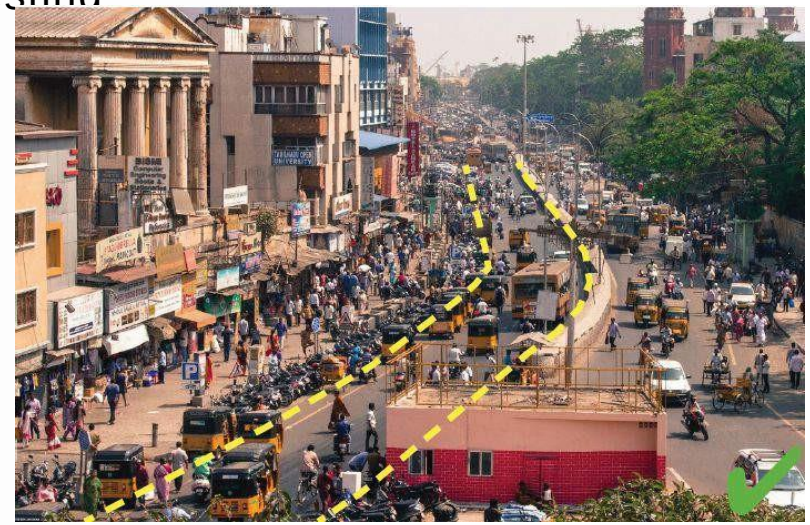


Step 3. Make the intersection **compact**

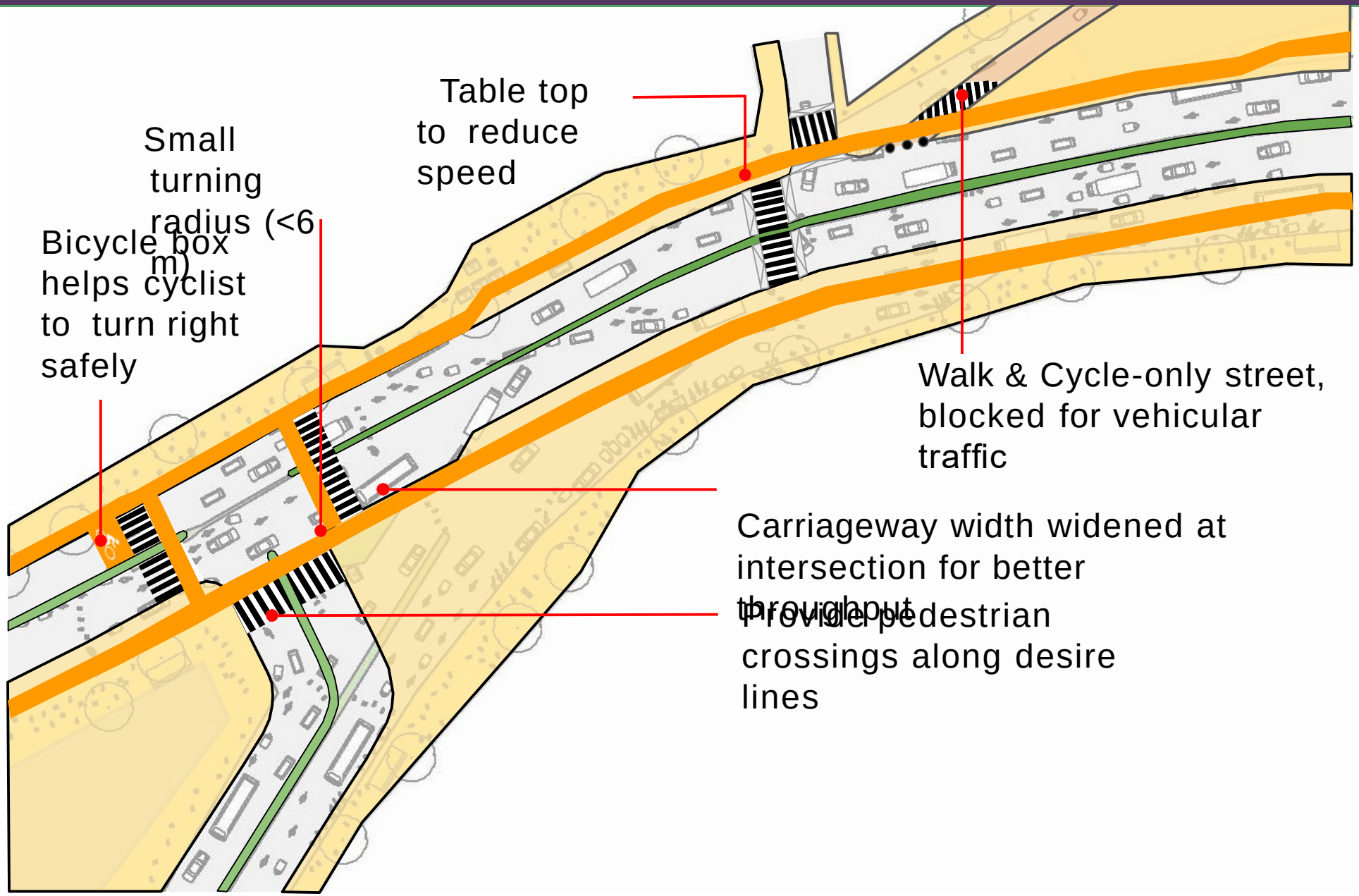


Make the carriageway width consistent to prevent bottlenecks, ensures **smooth traffic movement.**

An opportunity to create interesting



Step 4. Detail out the intersection



MANAGE PARKING

Parking supply, including **off-street and on-street parking, should be limited** and **dynamically priced.**

Pricing parking as a travel demand management measure **will encourage the shift to sustainable transport modes** from the private motorized vehicles.

The proposal should give attention to **design specifics for parking** and also recommend **pricing standards.**

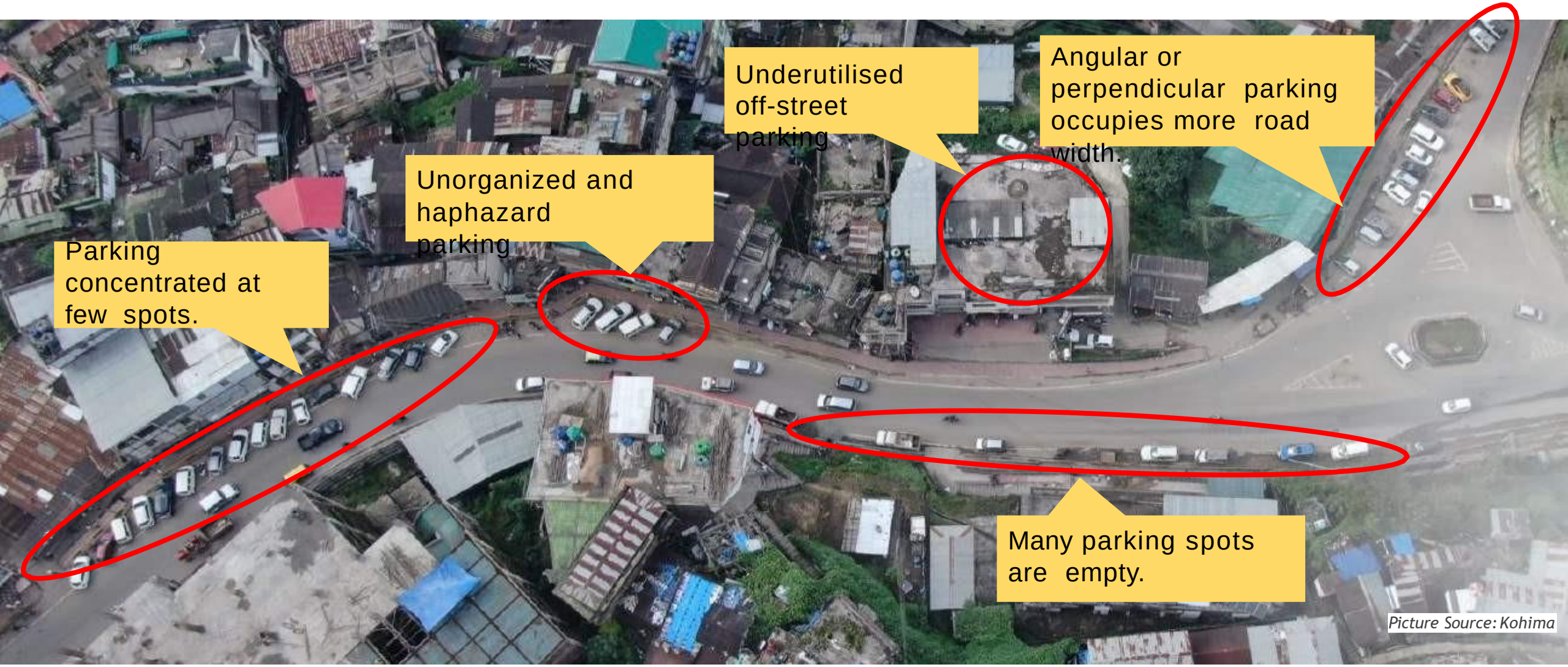
Free Parking Spaces — leads to → More Car Users

Demand based Priced Parking Spaces — leads to →

- Less Car Users
- Revenue for city to reinvest in public infrastructure
- Lesser pollution, and congestion

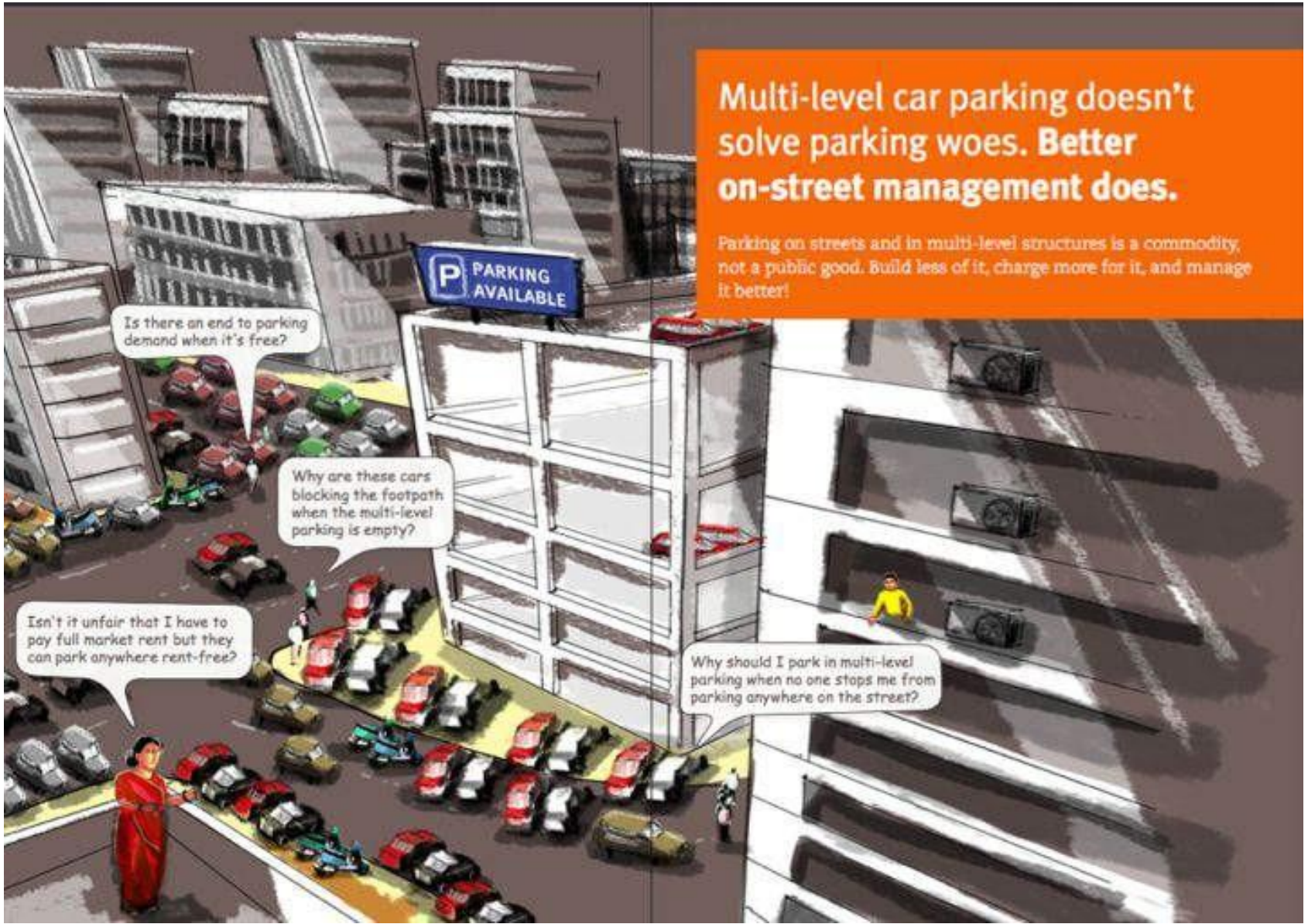
Observe the common issues caused by parking

Parking is a local problem

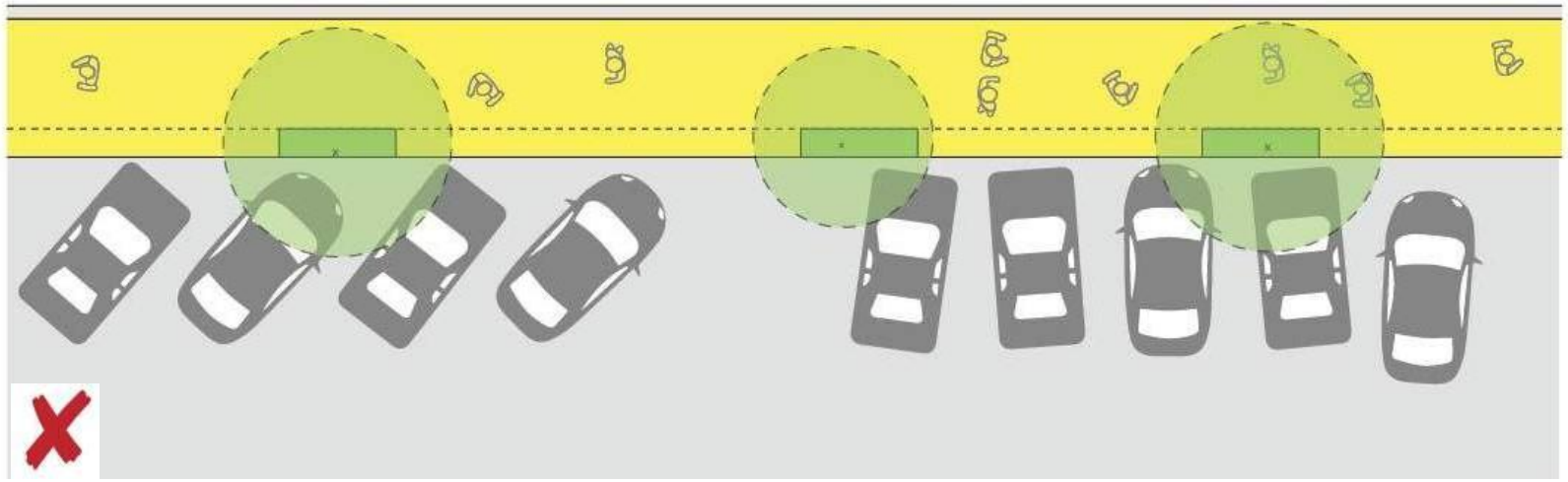


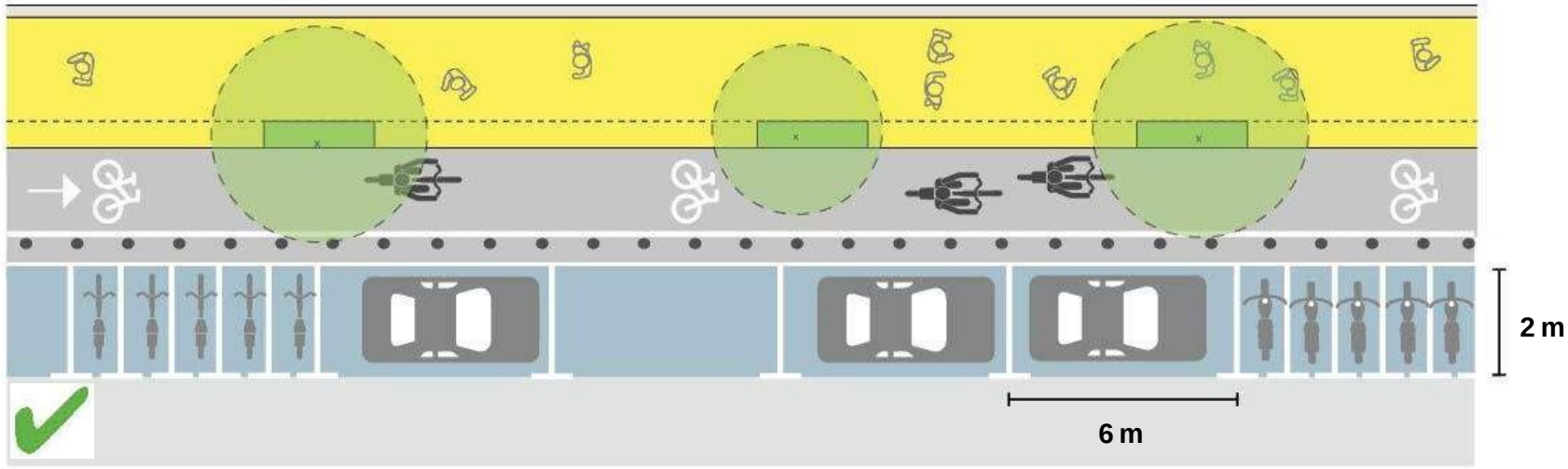
Let’s take a quick look at how we can manage parking!

- **Encourage use of off-street parking** facilities on priority.
- **On-street parking prices should be higher** than off-street parking.
- When parking spaces given on-street, **distribute slots and demarcate it clearly in design layouts**.
- **Prioritize parking for cycles and IPT** (Autos, shuttle services, etc.), then allocate space for private motor vehicles.
- **Recommend parallel parking slot for cars and perpendicular parking slot for two-wheelers.**



Parallel for cars, **perpendicular** for two-wheelers





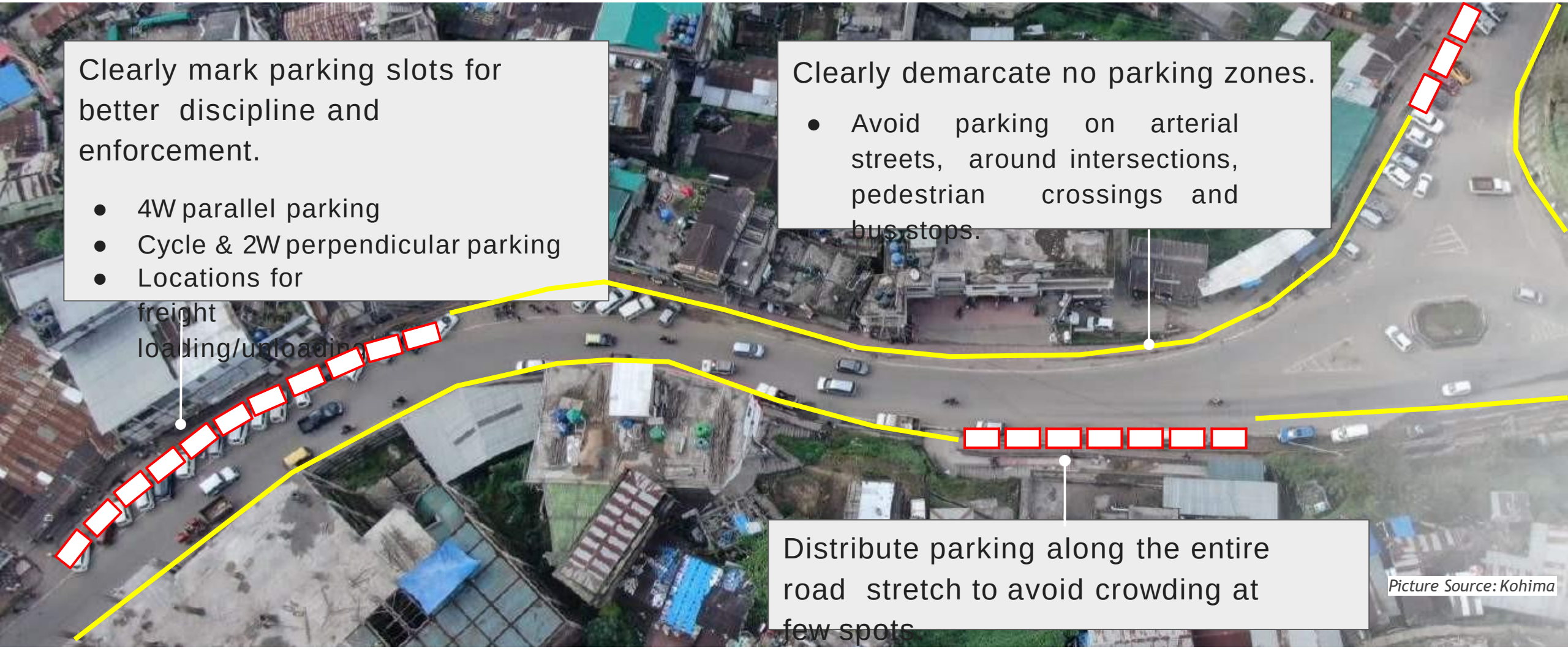
Vehicle type	Parking slot dimension
Cycle	1 m x 2 m
Two-wheeler	1 m x 2 m
Auto rickshaw	1.5 m x 3 m
Car	2 m x 6 m
Mini bus	2.6 m x 8 m
Bus	2.6 m x 15 m
Heavy commercial vehicle	2.4 m x 9 m
Light Commercial vehicle	2 m x 5m

Parallel parking is recommended on streets where parking is permitted.

Inclined and perpendicular on-street car parking should be avoided since these orientations create blind spots while reversing, and take up precious road space that could otherwise be used for cycling and walking facilities.

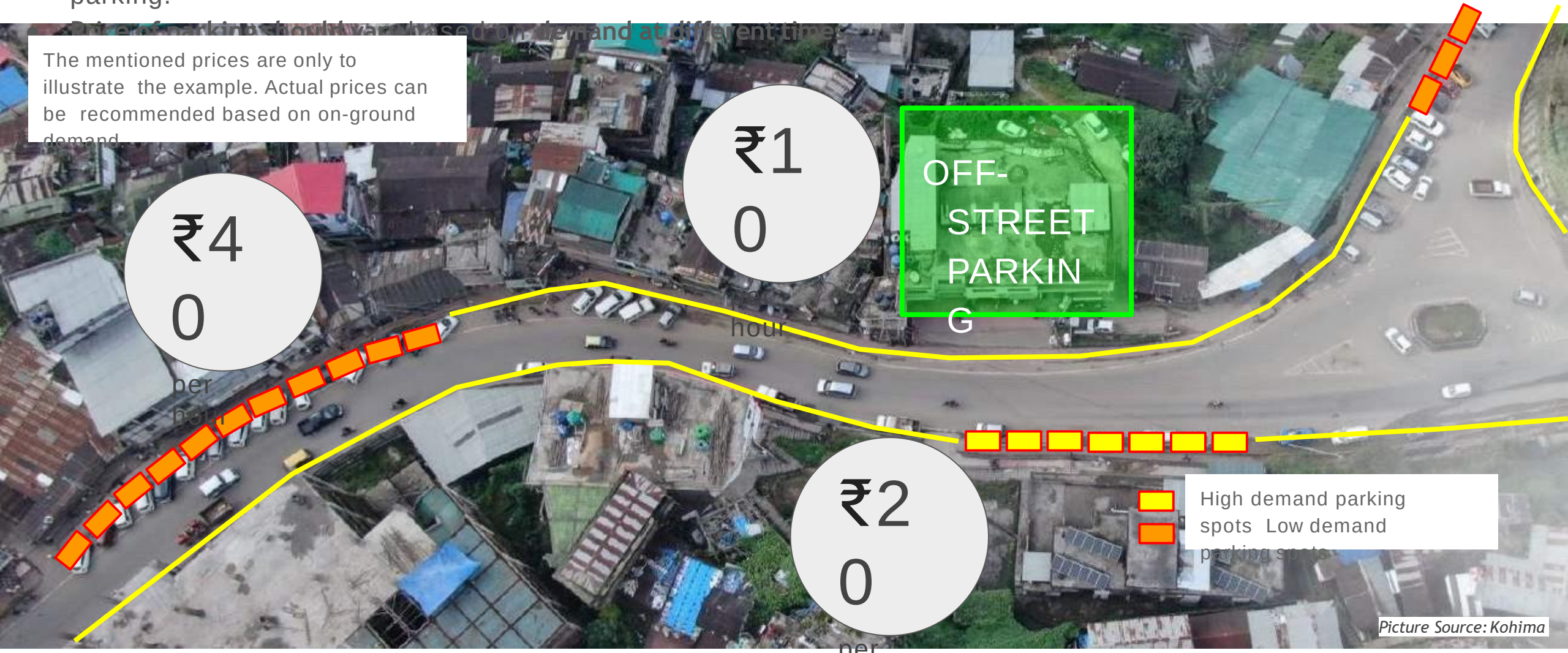
Demarcate | Distribute | Enforce

Strict enforcement is critical to ensure the success of parking management systems



Price it right!

- **Off-street parking prices** should cover the **cost of infrastructure, maintenance, and operator profit.**
- **On-street parking price should be higher** than that of off-street parking to induce a shift to off-street parking.
- **Price of parking should vary based on demand at different times**



Pay attention to other site-specific challenges too...

In addition to the illustrated basics, do not miss out responding to the other site-specific challenges, which may include:

1. **Vending** management
2. Organisation of paratransit services
3. **Waste management** & reorganisation of other utilities / services
4. **Access to public transport** & multi-modal integration

Source: Ryan Collerd

C. DETAIL OUT THE PROPOSAL

- MATERIAL SELECTION
- BUDGET ESTIMATE AND PHASING

MATERIAL SELECTION

Develop a simple and interesting **material palette for the permanent intervention and also the temporary Tactical Urbanism pilots.** Keep in mind the following points.

1. Utilise local materials
2. Respond to local aesthetics and character
3. Practise reuse and recycle to make it low-cost
4. Check the durability
5. Prefer materials and details that are easy to implement / reassemble

BUDGET ESTIMATE AND PHASING

- Include a **rough budget estimate for the tactical urbanism pilot** as part of the proposal
- Provide **a phasing & implementation strategy** by mapping time, resources, and stakeholders.

The templates provided are only samples. Do build on them and present the content innovatively.

Eg: TU Budgeting

Sl No	Particulars	Unit	Per Unit cost	No. of units required per km (as per design)	Cost estimate per kilometer
1	Traffic cones	Nos.	Rs. 750 - 400	XX	XXXX
2	Nylon heavy duty rope	Meter	Rs. 20 - 50	XX	XXX
3	Thermoplastic paint	Kg	Rs. 30 - 65	XXXX	XXXXX
4	Planter boxes	Nos.	Rs. 70 - 150	XXXXX	XXXXX
5	(Other items to be included as per design proposal)				

Rates are given as per current market price, may differ across cities. We recommend you to include a definite value, not range

Eg: TU Implementation plan

Sl No	Street Name / Landmark	Activities	Stakeholders	Days							
				01	02	03	04	05	06	07	08
1	Rajaji Road - Segment 01	Clearing up the encroachments	ULB, Volunteers								
2	Rajaji Road - Segment 02	Painting work	Volunteers, Traffic police								
		Installing street furniture	Volunteers, local residents, Hired carpentry team								
3	(Build the table as per design proposal)										

Photo: City contractors and local volunteers redesign the street to make it safer for people
Source: NACTO

D. COMMUNICATE YOUR PROPOSAL

- KEEP IT SIMPLE !

KEEP IT SIMPLE!

Communicating your design in a simple, legible, and bold manner is the key to reach the city officials and community.

Key points to consider:

1. **Highlight vision statement with supporting visuals.**
2. **Ensure the drawings are legible, to scale and reflects the design basics.**
3. **Narrate a story through simple graphics and use minimal text.**
4. **Present your proposals in comparison to existing site condition (Before / After)**

Source: Bandra Collective

A quick summary…

A. Develop a vision

B. Get the basics right in design

C. Detail-out the proposal

D. Communicate your proposal

Good luck to all participants!

For more details on designing Streets for People, check out our 'Complete Streets Toolkit'

Thank you

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