

Assessment of Safety & Accessibility of Delhi Bus Terminals



Delhi Transport Corporation



Acknowledgement

Safetipin would like to acknowledge the support received from Ms. Shilpa Shinde, Managing Director of *Delhi Transport Corporation (DTC)* to carryout the bus terminal audit and conduct commuter survey. We would like to thank Mr. Ravi Kasana, Depot Manager of Kalkaji Bus Depot and Mr. Praveen Kumar, Depot Manager of Ambedkar Nagar Depot for extending the support in conducting Focus Group Discussions with the on-duty staff and also for sharing the operational challenges as a manager.

Safetipin would like to extend its gratitude to *Purpose India* for forming 'Sustainable Mobility Network', and *Young Leaders for Active Citizenship (YLAC)* for mobilizing resources for the on-ground data collection.

The team that carried out the study for DTC include:

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Safetipin is a social impact organization working for systems change in cities by collecting and disseminating safety-related information on a large scale through a set of map-based applications. Safetipin works with city governments to use data for specific initiatives to make public spaces safer and inclusive.





Project Overview

Aim & Objectives

Aim

Improve public transport system to increase women's access to opportunities and leisure in the city.

Objectives:

- 1.** **Assess critical infrastructural needs** such as provision of lighting, footpath and availability of other amenities such as shops, restaurants, etc. **to support women commuters.**
- 2.** **Assess supporting facilities** such as female public toilet, restroom if provided at the terminal **to encourage and retain women employees in the transport sector.**

Bus terminals selected for the assessment



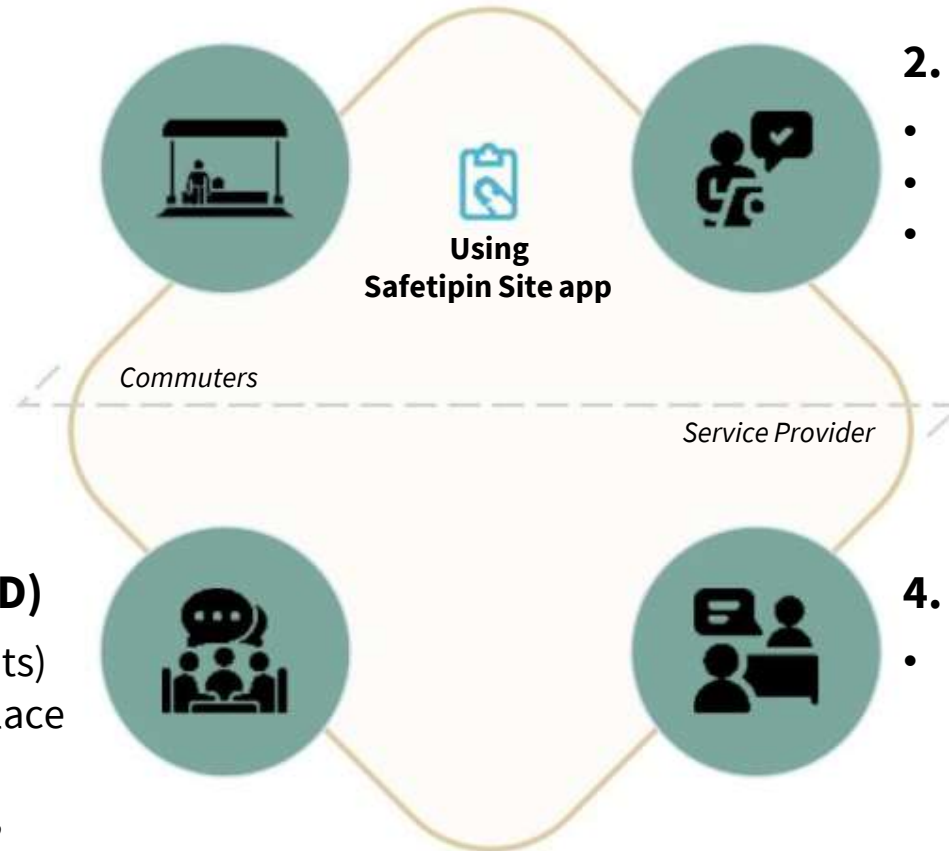
Methodology

1. Infrastructure Assessment

- Terminal premise
- Public Toilet
- Last-mile connectivity

3. Focus Group Discussions (FGD)

- Total FGDs = 4 no.s (28 participants)
- Women and men staff of Nehru Place & Mehrauli bus terminals
- A group comprised of bus drivers, conductors and marshals



2. User Surveys

- Total users surveyed – 100
- Male : Female – 30:70 ratio
- Survey period – Morning (9 am – 12 pm)
Evening (4 pm – 6 pm)

4. Key Informant Interviews (KII)

- Kalkaji Bus Depot Manager (Nehru Place bus terminal)



Timeline



Designed survey questionnaire for infrastructure audit and user feedback.

FEBRUARY 2023

Carried out infrastructure audits and user surveys at selected bus terminals.

Designed discussion questions for FGD & KII.

APRIL 2023

JANUARY 2023

Carried out ground assessment of the selected bus terminals.

Carried out pilot surveys at the selected bus terminals.

MARCH 2023

Conducted FGDs & interviews with depot managers at Kalkaji (Nehru Place) & Ambedkar Nagar (Mehrauli) Bus Depots.

Analyzed data gathered and drafted recommendations.



Key Elements for Assessment

Infrastructure Assessment + User Surveys

Focus Group Discussion + Key Informant Interview

Accessibility



- Walkpath
- Universally accessible elements
- Last-mile connectivity

Passenger Information



- Bus schedule
- Signages
- Real-time bus info
- Helpline number

Safety



- Level-boarding
- Security personnel

Facilities & Amenities



- Waiting areas
- Restrooms
- Public toilets
- Drinking water

Working Environment



- Shift details
- Daily routine details
- Awareness on anti-sexual harassment policy

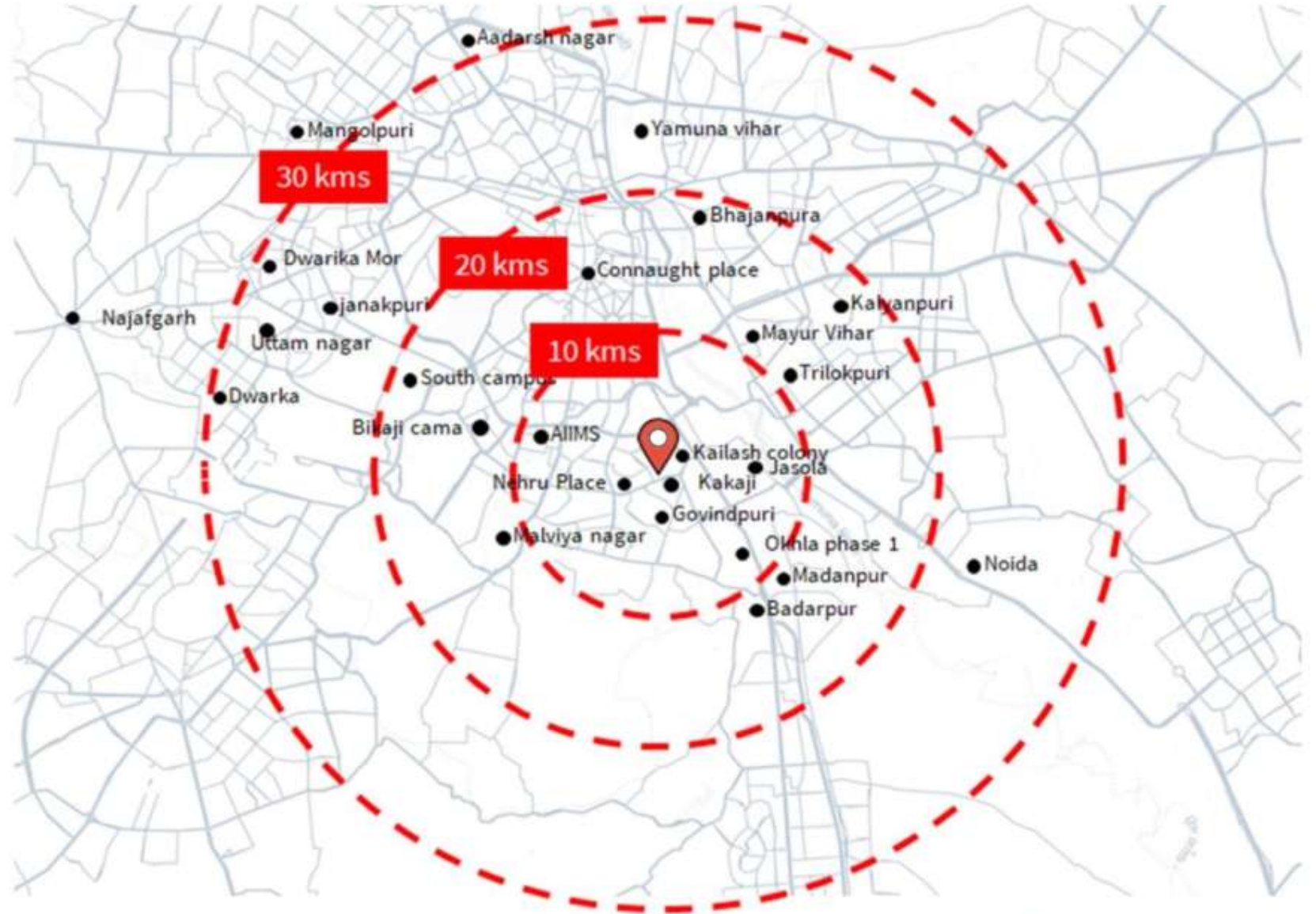


A photograph of the Nehru Place Bus Terminal in Delhi, India. The scene shows a line of buses, including a prominent red bus with the number 432m-68 on its destination sign. The terminal has a covered waiting area on the left and a building on the right. The sky is overcast, and there are trees and utility poles in the background.

Nehru Place Bus Terminal

Service Coverage

Passengers to Nehru Place Bus Terminal commute as far as **30 kms** on a daily basis.



Site Context



Key Findings – Lighting

1a. Illumination varies across the terminal premises



Brightly-lit Pass counter, helpdesk and toilet sections



No functional lights at the waiting area, leading to dark spots



Light from the kiosk contributes to illuminating the premises

“

There are lot of dark spots inside the terminal.
Lighting should be improved in the terminal to increase women's safety.

- Woman Passenger (18-24 yrs)



Key Findings – Lighting

1b. Poor lighting right outside the terminal premises



Buses parked outside the terminal premises curtail illumination on the footpath



Inconsistent illumination due to non-functional streetlights on the footpath



IPT stand (non-designated) illuminated by nearby shops and moving vehicles



Key Findings – Waiting Area

2. Accommodates provision for Persons with Disabilities. However, the platforms and shelters are broken



Broken ramp and tactile pavers at the waiting area



Broken shelter and lacks maintenance



Key Findings – Public Toilets

3. Women's toilet was found locked and not clean. Absence of dedicated caretaker and cleaning schedule.



Limited access to women's toilet (keys available at the helpdesk upon request)



Unkempt water closet



73% of the users who have used the toilet facility said that the **toilet is not clean.**

“

Toilets are always locked. There is no information regarding the keys and where to find them. I don't know if it is ever unlocked.

- Woman Passenger (25-35 yrs)



Key Findings – Passenger Information

4. Limited and poorly legible bus information on schedule and routes



Poorly legible and under utilized bus schedule information



Non-display of bus number while on halt



76% of the users said that **poor bus frequency** is a challenge.
(avg. waiting time: 60 mins)



Key Findings – Boarding & Alighting

5a. Lack of provision for safe boarding and alighting



Buses halt at the entrance for passengers to de-board



Buses do not stop in alignment with the platform for level-boarding and alighting

“

Buses often don't stop at the waiting area. I have faced injuries multiple times while running to catch it. **Buses should halt at the waiting area to safely get-off and board.**

- Woman Passenger (above 60 yrs)



Key Findings – Boarding & Alighting

5b. *Passengers prefer to wait at the terminal exit due to (i) broken shelter, (ii) non-display of bus number while on halt, (iii) buses not stopping at the waiting area*



Passengers taking shelter near the exit while waiting for the bus



Broken shelter of the waiting area



Non-display of bus number while on halt



38% of the users said that **buses not halting at the designated waiting area** is a challenge.



Key Findings – Drinking Water Facility

6. No provision for drinking water



51% of the users said that **absence of drinking water facility at the terminal** is a challenge.

“

While returning from school I feel thirsty in the heat. **I need drinking water facility** inside the terminal.

- Woman Passenger (18-24 yrs)

“

There is no drinking water facility at the terminal. We bring our own bottles. We refill it from outside or buy a new bottle if it is not enough.

- Women bus driver & conductors



Key Findings – Supporting Facilities

7. No provision of support facilities for women passengers and DTC staff

“

I am not comfortable breastfeeding in public. The **terminal should have a separate waiting room for women where she can nurse her child** while waiting for the bus.

- Woman Passenger (25-35 yrs)

“

We need dedicated ladies restroom at depots and terminals. We get 30 mins break for lunch and rest, but if there is no place in the terminal to actually rest what is the point of getting a break? Even if we are resting in the bus, we can not be sure of our safety as anyone can forcibly enter the bus and we don't feel safe.

- Women bus conductors

“

I want female home guards at the terminal so that women can comfortably talk with them about the issues experienced in bus or while waiting for the bus.

- Woman Passenger (25-35 yrs)





Key Action Points

Key Action Points



- **Provide lighting fixtures at all waiting areas.** Ensure they are functional and undertake periodic maintenance.
- **Ensure all pole lights within the premises are functional** and undertake periodic maintenance.



- **Repair broken platforms** of the waiting area. **Clear construction debris** from the premises.
- **Repair broken shelters** of the waiting area.



- Ensure that the **buses stop only at the waiting area** for passengers to de-board.
- Ensure that the **buses halt at the designated waiting area.**
- Ensure the **buses stop parallel and closer to the waiting area platform** for level-boarding and alighting.



- **Provide drinking water ATMs.**



Key Action Points



- **Deploy dedicated staff to manage and maintain public toilets.** Ensure to maintain cleaning schedule to monitor hygiene of the facility.
- Ensure that the **women's public toilet is opened throughout the operational period.** If locked, **provide information on availability of the keys** for passengers to use the facility.
- **Provide separate toilet or a dedicated cubicle** within the existing facility for **Persons with Disability.**
- **Provide basic sanitary facilities** such as liquid soap, tissue dispenser and sanitary pad vending machine (in women's section).



- **Display bus numbers** even while the buses are on halt.
- **Redesign bus schedule on a large board** where the information is legible, easy to understand, and weather-proof for better utility.

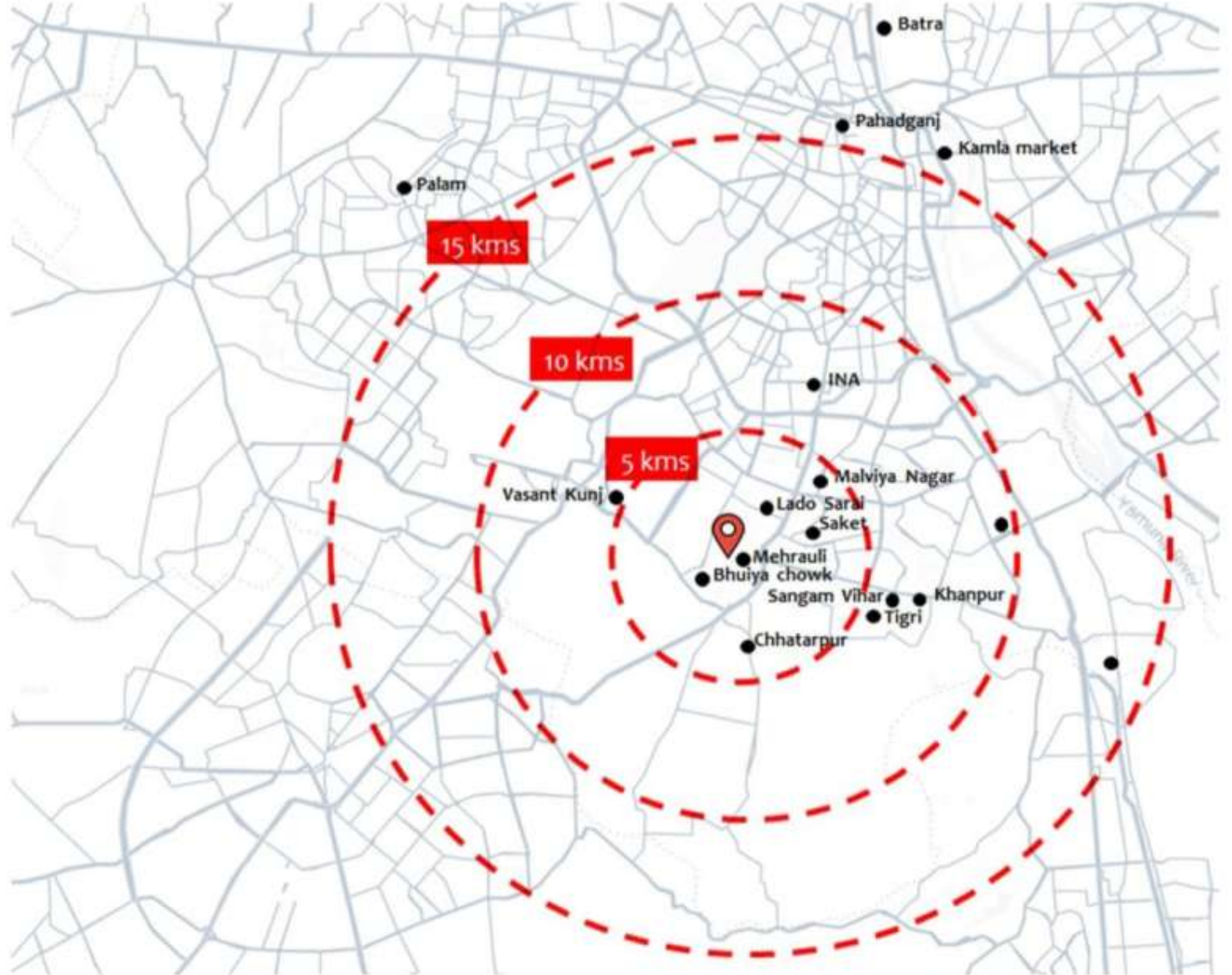




Mehrauli Bus Terminal

Service Coverage

Passengers to Mehrauli Bus Terminal commute as far as **over 15 kms** on a daily basis.



Site Context



Key Findings – Lighting

1a. Inadequate illumination inside the terminal (only one functional flood light)



One functional flood light illuminating the premises



Absence of lighting at the waiting area



Absence of lighting where passengers wait for the bus

“

The **lighting in the terminal should be improved**. It gets really dark at night.

- Woman Passenger (18-24 yrs)



Key Findings – Lighting

1b. Lights from shops and other passenger facilities contribute to illuminating the terminal premises



Lights from enquiry counter and small shop



Lights from pass counter



Lights from EV charging station



Key Findings – Pavement

2a. Broken platform at the waiting area



Key Findings – Pavement

2b. Broken, discontinuous and obstructed footpath



Broken and discontinuous footpath



Footpath obstructed by garbage and cement barricades

“

The **footpath is undulated and broken** which makes my walk towards the terminal very difficult. Also, the **level of the footpath is so high that I generally avoid walking on it.**

- Woman Passenger (36-50 yrs)



Key Findings – Public Toilets

3. Presence of well-segregated public toilet for men, women and PwDs. However, needs overall maintenance



Provision of handlebars for PwDs, however lacks overall maintenance



Washbasins and water closets are clean, however the facility lacks overall maintenance



Key Findings – Passenger Information

4. Illegible and smeared information board about bus schedule and routes



Bus schedule tucked away in the corner, limiting visibility and utility of the information



Passengers enquiring bus arrivals with the concerned person from DTC



38% of the users said that **non-availability of bus schedule at the terminal** is a challenge.



64% of the users said that **absence of real-time information on bus arrival** is a challenge.



Key Findings – Boarding & Alighting

5. All passengers prefer to wait at the terminal exit due to (i) buses not halting at the waiting area, (ii) non-display of bus number while on halt, (iii) poorly maintained waiting areas



Passengers waiting for the bus at the exit



62% of the users said that **buses not halting at the designated waiting area** is a challenge.



I feel that the bus should stop at the waiting area. Also, **I want a seating space** while waiting for the bus. I can not stand for long because of old age.

- Woman Passenger (above 60 yrs)



I want the area to be hygienic, without any garbage spillover and mosquitoes breeding. Also, the **benches must be clean and unbroken** so that one can sit comfortably.

- Woman Passenger (18-24 yrs)



Key Findings

6. Need security and support facilities for women passengers

“

Female home guards should be stationed inside the terminal. She should be visible, making rounds. Approaching her would be comfortable for women.

- Woman Passenger (18-24 yrs)

“

I feel there must be dedicated waiting areas for women, especially for pregnant women and/or women with children who might need them more. Men often do not offer the seat for women in need.

- Woman Passenger (18-35 yrs)

“

Sometimes while traveling at night, **I have witnessed men driving inside the terminal on their vehicles. I don't feel safe.** I think an enclosure to the premises would curb such activities.

- Woman Passenger (18-24 yrs)





Key Action Points

Key Action Points



- **Provide dedicated lighting at all the waiting areas and undertake periodic maintenance.**
- **Provide pedestrian-scale lights along the footpath** (on both sides of the park) leading to the waiting area.
- Ensure **all flood lights/pole lights within the terminal premises are functional.**



- **Repair broken platforms** of the waiting area.
- **Repair broken footpath** (on both sides of the park). Ensure they are evenly-paved and provide curb ramp for easy access.
- Ensure the **footpath is clear of all obstructions** such as from construction debris and garbage.



- Ensure **regular sweeping of the premises** to clear wastes, dried leaves and remove wild plants.
- Ensure the **dustbins are emptied on a daily basis** to avoid spillage.



Key Action Points



- Ensure that the **women's public toilet is opened throughout the operational period.**
- Ensure **toilet fixtures are rust-free and the walls are clean.**
- **Deploy dedicated staff to manage and operate** public toilet and ensure periodic maintenance.
- **Provide basic sanitary facilities** such as liquid soap, tissue dispenser and sanitary pad vending machine (in women's section).
- Provide **curb ramp for easy access.**



- Ensure that all **buses halt at and resume the trip from the designated waiting area.**
- **Display bus numbers** even while the buses are on halt.
- **Redesign bus schedule on a large board** where the information is legible, easy to understand, and weather-proof for better utility.



- **Provide signages/wayfinding** about the facilities at the entry and exit of the terminal.





Discussions with DTC Staff

Key Concerns of DTC staff at Kalkaji Bus Depot (Nehru Place Bus Terminal)

- 1) Absence of **women's restroom at the depot.**
- 2) Absence of **dedicated space for lunch and rest** at the terminal.
- 3) No provision of **paid weekly off** and less number of leave to avail.
- 4) No provision of **dedicated seat to bus marshals.**
- 5) Limited **rights to bus marshals** for taking actions against offenders.
- 6) Limited **control over harassment and overcrowding** in buses.
- 7) Lack of **training on addressing issues and concerns related to women's safety in bus**(to oneself and others).
- 8) Lack of **mechanism to hold passengers accountable for frivolous/false complaints.**



Key Suggestions of DTC staff at Kalkaji Bus Depot (Nehru Place Bus Terminal)

*“**The ladies special buses should start plying again** and their trips should be increased and made frequent during office hours. Ladies wait for long hours to get onto less crowded buses due to the fear of inappropriate touching or groping. However, if there are ladies special buses plying during the time, they will adjust even if it is crowded, I have experience that.”*

- Female Bus Conductor, 34 yrs

*“**We need dedicated ladies restroom at depots and terminals.** We get 30 mins break for lunch and rest, but if there is no place in the terminal to actually rest what is the point of getting a break? Even if we are resting in the bus, we can not be sure of our safety as anyone can forcibly enter the bus and high chances of mishappening.”*

- Female Bus Conductor, 34 yrs

*“**We want training on women’s safety annually** like conductors and drivers. We also want rights to protect people better. If someone misbehaves with us, we would be better equipped to deal with them.”*

- Female Bus Marshal, 24 yrs

*“**We need more buses** to increase the frequency, reduce overcrowding and prevent any kind of harassment. Atleast, **there should be a cap to number of passengers allowed to stand in the bus** to maintain crowding.”*

- Male Bus Driver, 48 yrs

*“There **needs a new way of investigating passengers’ complaints** or penalize them like in Haryana for false complaints. The truth is, we cannot stop a drunk man from boarding the bus. If we ask him to de-board, he will file a complaint against us and the actions will be taken on us and not on the passenger.”*

- Male Bus Driver, 48 yrs

*“There is no power in the hands of marshals, they cannot take rigid actions. **Some sort of power should be given to the marshals** which shall encourage them to take appropriate actions.”*

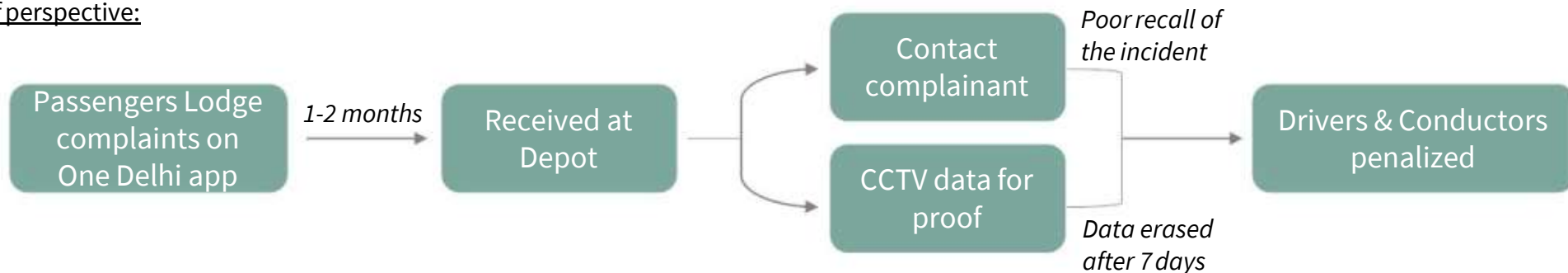
- Male Bus Conductor, 33 yrs



Key Concerns of DTC staff at Ambedkar Nagar Bus Depot (Mehrauli Bus Terminal)

- 1) Absence of **restroom for women staff at the depot.**
- 2) No provision of **dedicated seat to bus marshals.**
- 3) Limited **control over harassment and theft** on buses due to overcrowding.
- 4) No provision to **convert contractual staff into permanent.**
- 5) No **bus facility for night-duty staff.**
- 6) Lack of **mechanism to hold passengers accountable for frivolous/false complaints.**

DTC staff perspective:



Key Suggestions of DTC staff at Ambedkar Nagar Bus Depot (Mehrauli Bus Terminal)

*“I think **there should be a provision of dedicated restroom at the depot** with furniture like there is for men. When we come here in the morning we have to make our box of tickets. There is no provision of a bench. We stand for 20 minutes straight to do our boxes and then 8 - 8.5 hours in the bus while on duty.”*

- Female Bus Conductor, 30 yrs

*“**Every bus must be deployed by a combination of male and female staff.** Eg: if there are two female staff then there should be one male staff and vice versa. I think the presence of a female staff helps in addressing the challenges of women passengers on-board.”*

- Female Bus Marshal, 35 yrs

*“**Marshals should be given a dedicated seat inside the bus.** We have to stand for 8 long hours while on duty. Be it male or female marshals, there should be a dedicated seat for them inside the bus.”*

- Female Bus Marshal, 35 yrs

*“**We want our jobs to be permanent.** I am serving in DTC since 2010 on contract. The salary earlier was Rs. 5,000 and now it is Rs. 15,000. But it is not substantial when compared to the inflation rate. You can not afford good quality education for your children with this salary. There is a difference in salaries and benefits between contract and permanent staff. The permanent employees get money for their children’s education and for travel. They also get medical facilities.*

- Male Bus Conductor, 37 yrs

*“**We want the facility of the staff bus to resume,** which was discontinued in 2016. If someone does not have the means to come by their own vehicle, or if someone is serving the night shift which ends by 3 am, then they should get this facility.*

- Male Bus Conductor, 34 yrs

*“Passenger’s complaint reaches the Depot in a month or two. Usually by then, the complainants forget about it. We would check with CCTV people only to realize the data gets erased after 7 days. There is no way to verify the complaint, and the staff is assumed to be at fault. We get mentally harassed and fined. **There needs a new way to review passengers’ complaints.**”*

- Male Bus Conductor, 37 yrs





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Recommendations

Overall Recommendations

Public Toilet

- **Provide nursing room** at the terminal for young mothers that facilitates comfortable and convenient caring of their offspring.
 - Ensure the **facility is well-maintained with repainting whenever required.**
-

Restroom

- Provide **separate space to lunch/rest at the terminal** for bus drivers, conductors and marshals.
 - Provide **restroom for women staff at the depot** along with a provision of changing room.
-

Passenger Information

- **Display helpline numbers** at the waiting areas and strategically within the premises to improve passenger awareness and also to support women in distress.
- **Install Passenger Information System** (PIS) display board at waiting areas and within the premises to provide easy access to information on bus arrivals.
- **Provide braille signages and audio announcement system at the waiting areas** to facilitate all kinds of Persons with Disability (PwDs) in commuting on buses.



Overall Recommendations

Bus Operations

- **Increase bus fleet and frequency** to reduce incidences of theft and harassment on the bus.
 - **Organize periodic training sessions for bus drivers** on maneuvering buses to facilitate level-boarding and alighting.
-

Safety

- Ensure **patrolling by the home guards at the terminal** throughout the operational period to instil a sense of safety among women passengers.
 - **Provide spaces for women-led small businesses/vending** that could improve natural surveillance of the premises.
 - **Organize periodic training program on addressing issues related to women's safety for all on-duty employees.** The program shall include safety measures and actions for oneself as well as towards the passenger.
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User)

A handy tool for safer
routes especially for
women.
(Host Cryce, User)



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