CAG

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GUIDELINES FOR IMPROVING SCHOOL ZONE ROAD SAFETY

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GUIDELINES FOR IMPROVING SCHOOL ZONE ROAD SAFETY

The objective of these guidelines is to furnish school management with information and resources to formulate and execute a road safety action plan in conjunction with their school community. The goal is to mitigate the likelihood of incidents during students' journeys to and from school and to promote sustainable modes of travel.

1. Scope of the document

1. To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic in the vicinity of schools.

2. To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age.

3. On a broader level, it can enhance children's health and well-being, ease traffic congestion near the school, improve air quality and community members' overall quality of life.

2 . Bring together the right people

- Look for existing groups where a safe school zones program is a natural fit, such as the Parent Teacher Association.

- Next step is to create a vision. One approach is to ask each participant to share a vision for the school five years in the future.

- The group can then discuss the appropriate next steps and best way to work toward their vision. This may include forming committees to separate out the tasks.

2.1 Possible committees

Mapping and information gathering committee
Obtains maps, collects information about where children live, the routes they take to school and the condition of the streets along the way.

Outreach committee
Collects input from parents, teachers and students, and publicises the program to the school and community.

Education and encouragement activities committee
Works closely with school administration and teachers to put education and encouragement activities in place, gathers materials for activities and solicits donations for programming and prizes.

Enforcement and engineering committee
Develops recommendations for enforcement and engineering solutions, and works closely with the local government and other resources to find funding to make improvements.

Traffic safety committee
Identifies unsafe drivers' behaviour, and develops an education campaign to increase awareness.

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3. Develop a school road safety action Plan

3.1 How to identify Key issues (Refer Annexure 1 for the checklist to identify key issues)

1. **Conduct Site Visits:** Physically inspect the area around the school during peak hours when students arrive and leave. Observe traffic patterns, pedestrian behaviour, signage visibility, and potential hazards such as blind spots, intersections, or high-speed zones.

2. **Review Existing Infrastructure:** Evaluate the existing road infrastructure including crosswalks, traffic lights, signage, speed bumps, sidewalks, and bike lanes. Assess their effectiveness in promoting safety and identify any deficiencies or areas for improvement.

3. **Analyse Traffic Data:** Analyse traffic data to identify patterns of speeding, congestion, or accidents around the school zone. Use this information to pinpoint specific problem areas and prioritise interventions.

4. **Assess School Policies:** Review school policies related to student drop-off/pick-up procedures, parking regulations, and pedestrian safety guidelines. Determine if existing policies adequately address safety concerns or need refinement.

5. **Engage Stakeholders:** Consult with various stakeholders including school staff, parents, local authorities, transportation officials, and community members. Gather input on perceived safety issues, concerns, and suggestions for improvement.

3.1.1 Engaging with parents (Refer [Annexure 2](#) for the survey questionnaire)

Engaging with parents to identify road safety risks around the school environment is crucial for creating a safer and more supportive community for students. Parents often have firsthand experience navigating the roads around the school during drop-off and pick-up times. Their insights into traffic patterns, pedestrian behaviour, and potential hazards can be invaluable for identifying road safety risks. Parents are key stakeholders in their children's safety. By involving them in the process, schools can foster collaboration and collective responsibility for addressing road safety concerns.

Engaging parents in road safety initiatives demonstrates the school's commitment to the well-being of students and garners community support for implementing safety measures. Parents play a significant role in shaping their children's behaviour, including road safety habits. Engaging with parents allows schools to reinforce safe practices both at school and within the broader community.

Here's how to do it:

1. **Surveys and Feedback Forms:** Distribute surveys or feedback forms to parents to gather their perspectives on road safety issues around the school.

2. **Parent Focus Groups:** Organise focus group discussions with parents to delve deeper into road safety concerns and brainstorm potential solutions. Encourage open dialogue and active participation to ensure diverse perspectives are heard.

3. **Parent-Teacher Associations (PTAs):** Leverage existing parent-teacher associations or similar groups as platforms for discussing road safety. PTAs can advocate for safety improvements, organise awareness campaigns, and collaborate with school administration and local authorities.

4. **Collaborative Assessments:** Invite parents to participate in joint site visits or safety audits around the school. Encourage them to identify potential hazards, share observations, and contribute ideas for improving road safety infrastructure and policies.

3.1.2 Engaging with students and staff

Engaging with students and staff to identify key road safety issues around the school environment is essential for creating a safer and more conducive learning environment as they have firsthand experience navigating the roads around the school on a daily basis. Their insights into traffic

patterns, pedestrian behaviour, and potential hazards are invaluable for identifying road safety risks. Students and staff may notice road safety concerns that others overlook, given their different vantage points and experiences. Engaging with them ensures that a wide range of perspectives is considered in the assessment process.

Here's how to do it:

1. **Safety Surveys:** Distribute surveys or questionnaires to students and staff to gather their perspectives on road safety issues around the school. Include questions about pedestrian crossings, traffic congestion, signage visibility, and any safety concerns they may have.

2. **Safety Walks:** Organise safety walks or audits where students and staff can walk around the school perimeter together to identify hazards and potential improvements. Encourage participants to take notes and photographs of any safety concerns they observe.

3.1.3 Common road safety issues in the school environment

Traffic management issues
- Congestion during peak school hours
- Unsafe and illegal parking near school gates
- No designated pick up or drop off zones
- Non-compliance with school policies and procedures
- School hidden from drivers' view
- Overtaking near schools
- Lack of distinction between school entrances and exits
- Lack of appropriate traffic signage
- Inadequate use of nearby parking facilities, e.g. staff car park, community halls, clubs
- Failure to obey instruction from school traffic warden

Pedestrian safety
- Inadequate or no footpaths
- Poor visibility or lighting
- Unsafe crossing facilities
- Mix of pedestrians, cyclists and vehicles in the one area
- Unsafe intersections on route to school

Bicyclists safety
- Inadequate or poorly designed drop-off points leading to conflicts between vehicles and cyclists

- Lack of cycle ways
- Lack of bike racks/sheds
- Inadequate cycle training
- Non-wearing of helmets
- Lack of visibility
- Lack of lighting on bicycle

Unsafe driver behaviour
- Inappropriate speed
- Distracted driving
- Speeding in the school zone
- Not yielding to pedestrians
- Illegal parking in the school zone
- Double parking
- Reversing hazards

3.2 How to address the issues

After identifying road safety issues through site audits and engaging parents and students, the school management can take proactive steps to address these concerns effectively. There are several measures that can be taken to address each of these issues. The road safety toolkit provides a list of measures to solve the road safety issues.

The toolkit is divided into :
- Pedestrian safety
- Bicyclist safety
- Traffic management
- Unsafe driver behaviour

3.2.1 Toolkit for Enhancing Road Safety in School Zones

Pedestrian Safety:

1. **Inadequate Footpaths:** Provide proper footpaths with adequate width, height, smooth surface, and continuity, while addressing encroachments.

2. **No Footpaths:** Assess road width to determine feasibility of installing footpaths if absent.

3. **Poor Visibility or Lighting:** Install pedestrian path signs and provide adequate lighting along pathways.

4. **Unsafe Crossing Facilities:** Implement pedestrian crossings and refuge islands for safer pedestrian crossings.

5. **Driver Inattention:** Install high visibility crosswalks, tabletop footpaths, curb extensions, speed bumps, and school ahead signage. Enforce speed limits through signage and enforcement measures.

6. **Mix of Pedestrians, Cyclists, and Vehicles:** Create segregated pathways and separate entrances for pedestrians/cyclists and vehicles. Install pedestrian guard rails or bollards for separation.

Bicyclists safety

1. **Lack of Cycle Ways:** Demarcate cycle lanes and physically separated raised lanes for cyclists.

2. **Lack of Storage/Parking:** Provide bike racks or sheds inside the school premises for bicycle storage.

3. **Inadequate Cycle Training:** Offer education and road safety classes on cycling by schools.

4. **Non-Wearing of Helmets:** Conduct educational campaigns and enforce helmet-wearing policies.

5. **Lack of Visibility:** Design fluorescent-coloured cycles/helmets, install reflectors on cycles, and improve lighting.

Congestion /Parking Management Issues:

1. **Create a School Traffic Management Plan:** Designate pick-up/drop-off zones, pedestrian-only access, and parking zones within the school premises. Refer Annexure 3 for the steps to create a school traffic management plan.

2. **Develop Safe Routes to School Walking & Bicycling Plan:** Plan safe walking and bicycling routes to the school. Refer Annexure 4 for the steps to create safe walking routes to school.

3. **Traffic Management Outside School Gates:** Limit the number of entry points and implement traffic management measures.

4. **Volunteer Management:** Deploy volunteers and crossing guards during peak hours.

5. **Create Drop-off Policy for Parents:** Establish guidelines for parent drop-offs to streamline traffic flow.

6. **SEZ School Exclusion Zones or Heart Zone Initiative:** Establish car-free zones around schools to improve safety.

<u>Inappropriate Speed and Driver Behaviour:</u>

1. **Road Markings and Signages:** Install road markings to differentiate school zones and provide appropriate traffic signages.

2. **Traffic Calming:** Collaborate with local authorities to implement traffic calming measures such as curb extensions, speed bumps, and chicanes to reduce traffic speed.

3. **Visibility Checks:** Ensure visibility of the school zone through painted walls, high visibility crosswalks, signs, and painted kerb extensions.

3.3 Who will address it ?

Once the solutions for road safety issues are identified, the subsequent step is determining the responsible parties for implementing these solutions. Some solutions may be executed by various committees within the school. For instance, the school could establish a committee tasked with organising educational campaigns and promoting road safety awareness.

To enhance visibility, the school can arrange for the trimming of tree branches obstructing traffic signs and the overall visibility of the school premises. Engineering solutions which are complex, such as installing cycle lanes, maintaining footpaths, and installing speed bumps, can be coordinated with the pertinent local authorities.

By clearly delineating responsibilities and establishing communication channels with the relevant authorities, the school can ensure effective collaboration in addressing road safety issues and creating a safer environment for all stakeholders.

3.4 By when ?

To ensure proper implementation of the identified solutions, it is crucial to break down the different actions into smaller targets and set realistic deadlines for each of the actions. The solutions can be divided into long term and short term measures.
Having clear goals also encourages parents and the community to get involved in the initiative.

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4. Implement the road safety initiatives

To implement the solutions, follow the 4 E's - Education / Enforcement / Engineering / Encouragement -

Education -Educate parents and students about safe practices in the school zone.
Try to include fun activities to educate about walking and cycling for students at different grades.

Enforcement- Enforcement must be done by the traffic authorities to maintain speed limits, reduce unsafe driving behaviour etc. Some enforcement measures can also be undertaken by the school management such as employing volunteers to manage traffic, create a school traffic management plan to enforce pick up and drop off procedures and reduce congestion.

Engineering - Local authority responsible for improving the infrastructure in the school zone. Prioritise the solutions to be addressed based on impact and difficulty in implementing, cost effectiveness.

Encouragement- Encouragement measures must be undertaken by the school in terms of campaigns, incentives to students who use active travel modes, competitions for students, special events for parents and students to promote walking and cycling.

4.1 Engineering Measures:

The local authorities are responsible for implementing the engineering measures. Engineering measures include more permanent measures such as infrastructure improvements, road marking, installing signages etc. The school can identify the key areas that need to be improved with the help of the above toolkit and can coordinate with the appropriate authorities for implementation.

4.2 Encouragement Measures:

- **Walk to School Days:** Organise events to promote walking to school, such as International Walk to School Day.
- **Walking School Buses:** Establish walking groups with adult leaders to escort students to school safely.
- **Bicycle Trains:** Form groups of students cycling to school together with adult supervision.
- **Walking and Bicycling Events:** Host activities like bike rodeos, safety fairs, or walking challenges to encourage active transportation.
- **Safety Education Campaigns:** Conduct campaigns to raise awareness about safe walking and biking practices among students, parents, and the community.
- **Parent Involvement Programs:** Engage parents in supporting and promoting walking and biking initiatives, such as organising walking groups or volunteering for Safe Routes to School programs.

4.3 Enforcement Measures:

- **Traffic Law Enforcement:** Enforce traffic laws related to speeding, yielding to pedestrians, and respecting school zones.
- **School Zone Speed Enforcement:** Monitor vehicle speeds in school zones and enforce speed limits using measures like speed cameras or police patrols.
- **Safe Driving Campaigns:** Launch campaigns to educate parents about safe driving practices near schools, including reducing speed and yielding to pedestrians.

4.4 Education Measures:

- **Bicycle and Pedestrian Safety Education:** Offer classroom instruction and hands-on training on safe biking and walking practices.
- **Traffic Safety Education:** Teach students about traffic laws, road signs, and pedestrian safety rules through classroom lessons and interactive activities.
- **School Curriculum Integration:** Integrate pedestrian and bicycle safety topics into the school curriculum across subjects such as physical education, science, and social studies.

- **Safe Routes to School Education Programs:** Implement educational programs focused specifically on Safe Routes to School, including assemblies, workshops, and guest speaker presentations.
- **Parent Education Workshops:** Host workshops for parents on topics like pedestrian safety, bike maintenance, and route planning to encourage active transportation and reinforce safe behaviours.

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5. Monitor Progress

Monitor the progress of specific solutions implemented before and after to record the progress. Progress before - Can be recorded through infrastructure audit and surveys done for gathering information about the school site
- Collect student travel tally data to check if there's mode shift to walking and cycling
- Survey parents after the implementation and also at regular intervals to know if the issues have improved or not
- Collect data on student health, absentees, test score - to see if active travel has an impact on their performance - to help create a narrative among opposing parents and make active travel as the 100% transportation mode
- Collect data of air quality before and after implementation

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6. Evaluate and revise

Evaluate why the solutions are not effective. Identify whether there's a need for more education and encouragement or stricter enforcement.
Further investigations can also be done through workshops with PTA, school wardens etc
- While monitoring progress, check if there are improvements after implementation and if not, evaluate why the implemented solution is not effective or where it is lagging
- Collect data on number of violations where specific enforcement is present- for eg. how many parking violation after the implementation to see the effectiveness of solutions implemented

Revise - As the school environment changes continuously, there is a need to revise the road safety plan accordingly.

ANNEXURE 1

Checklist for identifying key issues

1. **Traffic Patterns:**
   - Observe the flow of vehicular traffic around the school zone.
   - Note any congestion points or bottlenecks.
   - Assess the speed of vehicles approaching the school area.

2. **Pedestrian Behaviour:**
   - Monitor how students and pedestrians navigate the area.
   - Ensure they use designated crosswalks and sidewalks.
   - Watch for any instances of jaywalking or unsafe crossing behaviour.

3. **Signage Visibility:**
   - Check the visibility and condition of traffic signs, including speed limits, school zone signs, and crosswalk markings.
   - Ensure signage is adequately positioned and unobstructed by vegetation or other objects.

4. **Potential Hazards:**
   - Identify blind spots where visibility of pedestrians or vehicles may be limited.
   - Note any intersections or road junctions with poor visibility or confusing layouts.
   - Identify areas with high-speed traffic or instances of speeding vehicles.

5. **Infrastructure Assessment:**
   - Check if sidewalks and cycle lanes are present
   - Inspect the condition of sidewalks and cycle lanes for any damage or obstructions.
   - Check if the current pedestrian and bicycle routes separated from motor vehicles by the use of raised pathways, bollards or railings
   - Check for the presence of any School Advance signs, School Crossing signs, School Speed Limit signs, and No Parking signs
   - Check if there is a designated school zone
   - Check for the presence of speed bumps, traffic calming measures, or pedestrian refuge islands.

6. **Intersections :**
   - Assess the safety and accessibility of pedestrian crossing points, including crosswalks and pedestrian signals.

- Check if there are high visibility crosswalks
- Ensure adequate crossing time for pedestrians to safely navigate intersections.

7. **School Zone Operations:**
- Evaluate the management of student drop-off and pick-up zones.
- Check for compliance with designated parking areas and loading zones.
- Check if drop off areas are designed so that students walking and cycling are protected from   vehicles
- Check if traffic moves freely without congestion and backup
- Ensure the presence of staff or volunteers to assist with traffic control and pedestrian safety.
- Is there an effective school targeted program of traffic enforcement?

8. **Interaction with Drivers:**
   - Monitor interactions between pedestrians, especially students, and drivers.
   - Look for instances of drivers yielding to pedestrians at crosswalks or school crossings.
   - Note any instances of aggressive driving or disregard for traffic laws.

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ANNEXURE 2

Survey Questionnaire for parents

Here's a sample survey questionnaire for parents about road safety in the school zone:

Parent Survey on Road Safety in the School Zone

Dear Parent/Guardian,

Thank you for participating in this survey. Your feedback is valuable in helping us improve road safety in the school zone. Please take a few minutes to answer the following questions:

1. Demographic Information:

   - Parent/Guardian Name:
   - Child's Name (if applicable):
   - Grade Level of Child:

2. How do you typically commute to school with your child?

   ☐ Walking
   ☐ Cycling
   ☐ Carpooling
   ☐ Two wheeler
   ☐ Cars
   ☐ Private vans
   ☐ Private autos
   ☐ School bus

3. Do you understand the rules and regulations specific to the school zone? (e.g., speed limits, parking restrictions, designated drop-off/pick-up areas)

   ☐ Yes
   ☐ No

4. What challenges do you face during drop-off and pick-up times in the school zone? (Check all that apply)

   ☐ Traffic congestion
   ☐ Difficulty finding parking

☐   Unsafe pedestrian crossings

☐   Limited visibility of signage

☐   Encounters with aggressive drivers

☐   Other (please specify):

5.   On a scale of 1 to 5, how safe do you feel when navigating the school zone with your child? (1 = Not safe at all, 5 = Very safe)

6.   What specific safety concerns do you have regarding road safety in the school zone? (Open-ended)

7.   What measures do you think could be implemented to enhance road safety in the school zone? (Open-ended)

8.   How can the school better communicate road safety guidelines and regulations to parents and caregivers?

9.   Would you be interested in participating in road safety workshops or informational sessions organised by the school?

☐   Yes

☐   No

10.   How do you currently educate your child about road safety outside of school?

Thank you for taking the time to complete this survey. Your input is invaluable in helping us create a safer environment for our students.

Sincerely,
[School Name/Organization]

Feel free to customise the questionnaire based on the specific needs and concerns of your school community.

ANNEXURE 3

School Traffic Management Plan

A school traffic management plan is a comprehensive strategy designed to address the flow of traffic, pedestrian safety, and parking around a school campus during peak drop-off and pick-up times. It aims to ensure the safety of students, parents, staff, and other pedestrians, as well as minimise traffic congestion and disruptions in the surrounding neighbourhood.

Here are steps to create a school traffic management plan:

1 Assessment and Data Collection:

- Identify peak arrival and dismissal times.
- Assess current traffic flow, pedestrian routes, parking areas, and safety hazards.
- Collect data on the number of students, staff, and vehicles entering and leaving the school.

2 Goal Setting

Define clear objectives for the traffic management plan, such as improving safety, reducing congestion, promoting alternative modes of transportation, and enhancing communication with stakeholders.

3 Develop Strategies and Solutions

- **<u>System for Drop-off and Picking up Students:</u>**
- Pedestrian Entrances: Clearly marked entrances designated for pedestrians only.
- Bus Loading Zone: A designated area for buses separate from car and pedestrian entrances.
- Off-Street Drop-off and Pick-up Area: An area off the main road for parents to drop off and pick up students.
- Staff Management: Staff stationed at pick-up and drop-off zones to manage traffic flow and ensure safety.
- Staggered Start and Finish Times: Consider staggering start and finish times for different grade levels to alleviate traffic congestion.
- Road Management during Peak Hours: Consider making the school road one-way during peak school hours or temporarily closing it to vehicles to enhance safety and reduce congestion.

- Illegal Parking: Monitor and address any instances of illegal parking near the school to ensure safety and maintain positive relations with neighbours.

- **Arrival or Dismissal Procedures:**
- Parents and students must use designated pedestrian entrances or the off-street drop-off and pick-up area.
- Consider implementing kiss-and-go zones for quick drop-offs and park-and-stride areas for those who prefer to park further away and walk.
- Have policies in place regarding access, parking near school, and cycle usage to ensure safety and efficiency.

- Provide incentives for sustainable transportation choices, such as rewards for walking or biking to school.
- Coordinate with local authorities to enforce traffic laws and parking regulations around the school.

4 Communication and Outreach

- Develop a communication plan to inform parents, students, staff, and the community about the traffic management plan.
- Use multiple channels such as newsletters, websites, social media, and signage to disseminate information.
- Provide regular updates and reminders about traffic rules, designated drop-off/pick-up areas, and alternative transportation options.

5 Implementation and Evaluation:

- Implement the traffic management plan gradually, starting with pilot programs or temporary measures to test effectiveness.
- Monitor traffic flow, pedestrian safety, and compliance with the plan.
- Collect feedback from parents and adjust the plan as needed based on evaluation results.
- Continuously review and update the plan to address changing needs and conditions.

ANNEXURE 4

Steps to establish safe walking routes to school

- <u>Create a walkshed map</u> - Identify the students who walk to school and mark their residences on a map.

- <u>Identify existing walking routes</u> - The students and parents can be handed out maps of the school, and the routes that they currently take to school can be marked on the maps.

- <u>Walkability Audit</u> - The school can then undertake a walkability audit with the help of a checklist. The students can also be involved in the walkability audit using the walkability checklist below. The routes which are safer to walk can be marked and also the routes which need improvement and are unsafe can also be identified.

- <u>Distribute the maps</u> - The map with safe routes for walking can be distributed to students and can also be posted on the school website.

Walkability Audit Checklist

1. Sidewalks and Paths
- Are sidewalks and paths present and well-maintained?
- Are sidewalks wide enough for pedestrians to walk comfortably side by side?
- Are sidewalks free from obstructions such as debris, parked cars, or overgrown vegetation?
-Are the sidewalks shaded ?
- Are there curb ramps at intersections and crossings?

2. Crosswalks and Pedestrian Crossings
- Are crosswalks clearly marked and visible?
- Are there pedestrian signals at intersections with traffic lights?
- Are the pedestrian signal timing adequate for the pedestrians to cross?
- Are there raised crosswalks or other measures to enhance pedestrian safety?

3. Traffic
- Is traffic speed appropriate for pedestrian safety?
- Do drivers yield to pedestrians?

4. Intersection Safety
- Are intersections well-marked with clear signage and pavement markings?
- Are pedestrian crossings well-defined and easily accessible?

- Are there pedestrian refuge areas at intersections with wide crossings?
- Are there curb extensions or other measures to reduce crossing distances?

5. Lighting
- Are there adequate lighting fixtures along pedestrian routes, including at intersections and crossings?