PEDESTRIAN AND PUBLIC TRANSPORT GUIDELINES FOR NATIONAL ROADS IN SOUTH AFRICA

SANRAL
BACKGROUND
SANRAL now faces challenges related to:

- Pedestrians crossing freeways at grade;
- Public transport modal transfer areas;
- Public transport activities such as dropping off and picking up passengers alongside national roads;
- Informal trading at such locations;
- Pedestrian activities inside the road reserve (pedestrians walking next to the road/inside shoulders); and
- Increased pressure to accommodate these public transport and pedestrian facilities
• Legacy Situations:
  • Poor Access Management
  • Poor Pedestrian Management (Alongside and crossing the road)
  • Poor Spatial planning (high volume pedestrian generators located close to the freeway)
  • Many schools (3403) within 2km of SANRAL roads

This resulted in the need to develop a guideline of this nature with the objective to address the management and provision of pedestrian and public transport facilities
CURRENT SITUATIONS
CURRENT PUBLIC TRANSPORT PROBLEMS

Many of these inherited with routes taken over i.e R71, R61 – pedestrian, vehicle, animal conflicts
CURRENT PUBLIC TRANSPORT PROBLEMS

N11– 10km from Middelburg
CURRENT SOLUTIONS

N2 George
CURRENT SOLUTIONS

N2 North of Durban towards King Shaka International Airport
GUIDELINE DOCUMENT
OVERVIEW OF THE GUIDELINE DOCUMENT

• Background and Legislation Requirements
• Addressing the problem and approach
• Types of pedestrian and public transport facilities based on the road type with typical drawings
• Pedestrian and cycling accommodation
• Manual Crossing Options
• Operations of facilities
• Complimentary infrastructure (Public Transport shelters)
• Contrary to popular opinion, there is a way to legally have pedestrians on freeways with the use of proper road signage
• Critical factor – to implement in the correct environment and with proper control
APPROACH

Accept reality and manage it:
  • Balance between freeway mobility, public transport and pedestrian accommodation
  • Ensure safety of both pedestrians and road users

Questions:
  • How do we accommodate public transport and pedestrians responsibly?
  • How do we improve integrated planning (SPLUMA)?
  • Is SANRAL getting involved in public transport operations?
POLICY VS GUIDELINE

- Facility on Moloto Road will be different from the N1 Easter bypass
- Facilities in a rural environment (irrespective of road class) will be different from an urbanised area
- Allows in design principles for phased development of an integrated roadway/public transport/pedestrian facilities
OBJECTIVES OF THE GUIDELINE

• To develop an understanding of the problem
• To understand the legal framework for managing pedestrians and public transport activities
• To provide a uniform approach for all SANRAL regions
• To provide guidance to designers and decision makers through a system approach
HOW TO APPLY THE GUIDELINES

Rational approach:

• Define the study area (5km to 10km in length along the road)
• Assess public transport routes and network
• Determine the land use that will affect the road
• Define the road network within the study area
• Consult RAMS
• Prepare a sketch plan of the area

Once the status quo information has been collated and the problem has been identified, the network and specific design guidelines can be used to develop solutions.
### HOW TO APPLY THE GUIDELINES CONT..

<table>
<thead>
<tr>
<th>Area and Road Type</th>
<th>Freeway</th>
<th>Non-Freeway</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>Road Classification</td>
<td>Class 1</td>
<td>Class 1</td>
</tr>
<tr>
<td>Pedestrian walkways</td>
<td>None</td>
<td>NO</td>
</tr>
<tr>
<td>Pedestrian bridges</td>
<td>YES if warranted</td>
<td>YES if warranted</td>
</tr>
<tr>
<td>At-grade pedestrian crossings</td>
<td>Not Allowed</td>
<td>Not Allowed</td>
</tr>
<tr>
<td>Public transport facilities</td>
<td></td>
<td></td>
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<tr>
<td>Intermodal transport facilities</td>
<td>Under certain conditions</td>
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</tr>
<tr>
<td>Bus stops / lay-bys</td>
<td>Under certain conditions</td>
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</tr>
<tr>
<td>Taxi stops / lay-bys</td>
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<tr>
<td>Bicycle facilities</td>
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</tr>
<tr>
<td>Bicycle lanes (painted)</td>
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<td>NO</td>
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<tr>
<td>Bicycle path</td>
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<td></td>
<td></td>
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<tr>
<td>Other</td>
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<td></td>
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<tr>
<td>Animal drawn vehicle</td>
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</table>

**Document Reference**
- Isolated
- Where warranted
- As required

**SANRAL**

**BUILDING SOUTH AFRICA THROUGH BETTER ROADS**
Alternatives to Design options – provision of Scholar patrol

NRTA – patrols can be implemented on Class 1,2,3,4 roads if a single and dual carriageway with relevant signage and permissions.

Pointsmen are volunteers that undertake traffic management duties – no provision in legislation to undertake these duties.
SANRAL Shift – operations and maintenance of PT facilities

Agreements and approvals in place to manage the infrastructure on National Roads.

Enforcement presence – safety of the facility and the road users.
PUBLIC TRANSPORT FACILITIES
The types and designs of facilities incl. typical drawings are provided according to the road classification and road type (i.e. intersection etc.):

- Class 1 – Urban
- Class 2 – Rural
- Class 1 – Urban (Intersection)
- Class 2 – Rural (Intersection)
- Class 2 – Divided
- Class 2 – Undivided
- Roundabouts – Class 2 Urban Single Lane
- Roundabouts – Class 2 Urban Double Lane
- Class 1 – Urban- Interchanges
ON ROAD FACILITIES

Class 2 Road - Divided
Class 2 Road - Undivided
ON ROAD FACILITIES

Class 1 Urban
INTESECTIONS

Class 2 Urban
ROUNDABOUTS

Class 2 Urban
Single Lane
INTERCHANGES

PUBLIC TRANSPORT STOPS ON INTERCHANGE SLIP ROADS
(for services entering or leaving a freeway

Public Transport Lane
Stop
All purpose road

Public Transport Bay
Stop
Freeway

PUBLIC TRANSPORT STOPS FOR THROUGH SERVICES AT AN INTERCHANGE

Ramped footway
Stop
All purpose road

Handle pedestrians freeway crossing on road bridge

Ramped footway
Stop

Class 1 Urban
PEDESTRIANS
PEDESTRIANS ALONG THE ROADWAY

Should walkways be allowed inside the road reserve
  • Yes
  • How are they separated?
  • Safe distance away from traffic?
PEDESTRIAN ACCOMODATION

- More free flow a facility, the higher the conflict between pedestrians and vehicles:
  - Slipways
  - Circles
  - Single point interchanges
  - Diverging diamond
  - Freeway in general
- Pedestrians need to be separated preferably physically with barriers to ensure safety and control
- Pedestrians feel insecure in enclosed environments
- Need to find the necessary mitigation
PEDESTRIAN MOVEMENT

STORMVOEL ROAD

AT DIAMOND INTERCHANGES
PEDESTRIAN AND PUBLIC TRANSPORT CONFLICTS

N2 Plettenberg Bay
PEDESTRIAN AND PUBLIC TRANSPORT CONFLICTS

Solution: Pedestrian Bridge and Drop off and collection Zone
PEDESTRIAN AND PUBLIC TRANSPORT CONFLICTS

Completed Solution
CONCLUSIONS
CONCLUDING REMARKS

• Pedestrians and public transport comprises more than 60% of person movement
• As SANRAL we must have clear guidelines and thresholds to accommodate it
  • Legally
  • Good balance between mobility and safety
CONCLUDING REMARKS

• Mindshift
  • Instead of wishing it away rather accept the responsibility to properly incorporate and accommodate it.
  • SANRAL is getting into the public transport operations space
  • This will also be a good selling point from SANRAL to politicians to show it’s not only about roads.
THANK YOU