Towards 100,000 Km Safer Roads

Monzur Sadeque

Executive Engineer (Planning)

Custodian of 100,000 Km Roads

- LGED has paved more than 97,000 Km of Rural Roads.
- More 5000-6000 Km paved roads are being added each year. The total road length will exceed 100,000 Km by 2015.
- LGED is going to be the CUSTODIAN of 100,000 Km Rural Roads that demands to be SAFER roads

Why Road Safety

Road Crashes are draining out our Poverty Reduction Efforts

WHY ROAD SAFETY

- Road Crashes are antagonstic with Mission & Vision of LGED

Why Road Safety

- Most of the bread earners are being killed in roads putting the families in acute poverty.

Who will try to imagine ??

Think about it, if it's YOU

Contents

- Road Safety History of LGED
- Where to FOCUS
- Experiences in Indonesia
- Some Issues to ponder
- Engineering, Enforcement and Awareness
- Community Road Safety –What is the right approach ?

Projects for Road Safety Improvement

- RRMIMP-II (1996-2003)
- RTIP-I (2003-2012)
- RDP-25(2003-2009)
- RIIP-II (2008-2013)
- SRIIP
- RTIP-II

The knowledge development

- Finding the causes of Road Accident in Rural Roads
- Training of LGED staff
- Awareness building in hazardous areas in Project districts
- Road Safety materials development
- Road Safety Publications, Videos etc.

- Please visit the webpage
- www.lged.gov.bd; Road safety unit
- PDF file of most of the publication, posters, booklets are available.

Where we are standing now in respect of Rural Road Safety ?

- Lots of Materials, little in Use
- Road Safety Engineering Practices yet to be developed
- More emphasis on Awareness Building
- Where should be the **FOCUS ?**

Sharing of learning in Bali, Indonesia

LGED Team

- Zahidur Rahman Khan, SE, Dhaka
- Sharful Anam Khan, EE, Dhaka
- Ismat Kibria, EE, Mymensigh
- Monzur Sadeque, EE (Planning)
- Golam Mawla, DPD-Comilla, RTIP-II
- Dewan Abdus Sabur, Sr AE, RTIP-II
- Jamal Uddin , UE, Raipura

Ministry

- Dr. Anwar Hossain Howlader, DS

Workshop Leader

Phillip Jordan

31 Years with VICTORIA Roads,
Melboune

The Consultant who pioneered
Road Safety Engineering
in Indonesia

Road Safety Situation in Indonesia & Bangladesh

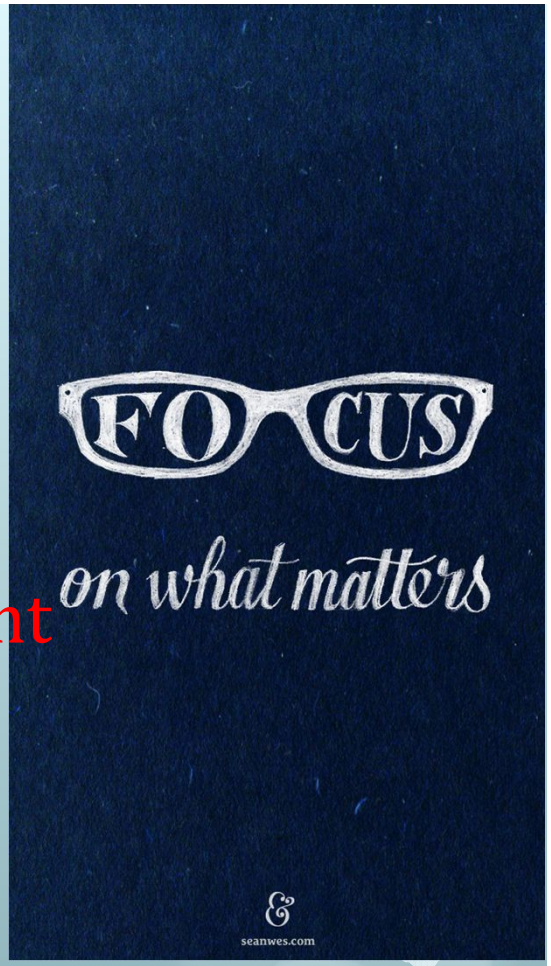
- Deaths- 30000+ (2011) has been reduced to 25000+ (2013) because of road safety interventions. (in spite of 35% increase in motorized traffic during the last two years.)
- Indonesia is practicing Road Safety Engineering as well as Enforcement & Education
- Bina Merga (Roads & Highways) has focused in Road Safety Engineering
- Bangladesh: Death toll (Police Report: 4000–5000)
- WHO Estimate- Around 19000
- No sophisticated data collection system

Road Safety in LGED Roads

- According to Police Report, around 7-8% accidents of the country happens in Rural Roads
- It may be underreported as police does not have sophisticated mechanism for data collection and reporting.

Learning in the Course

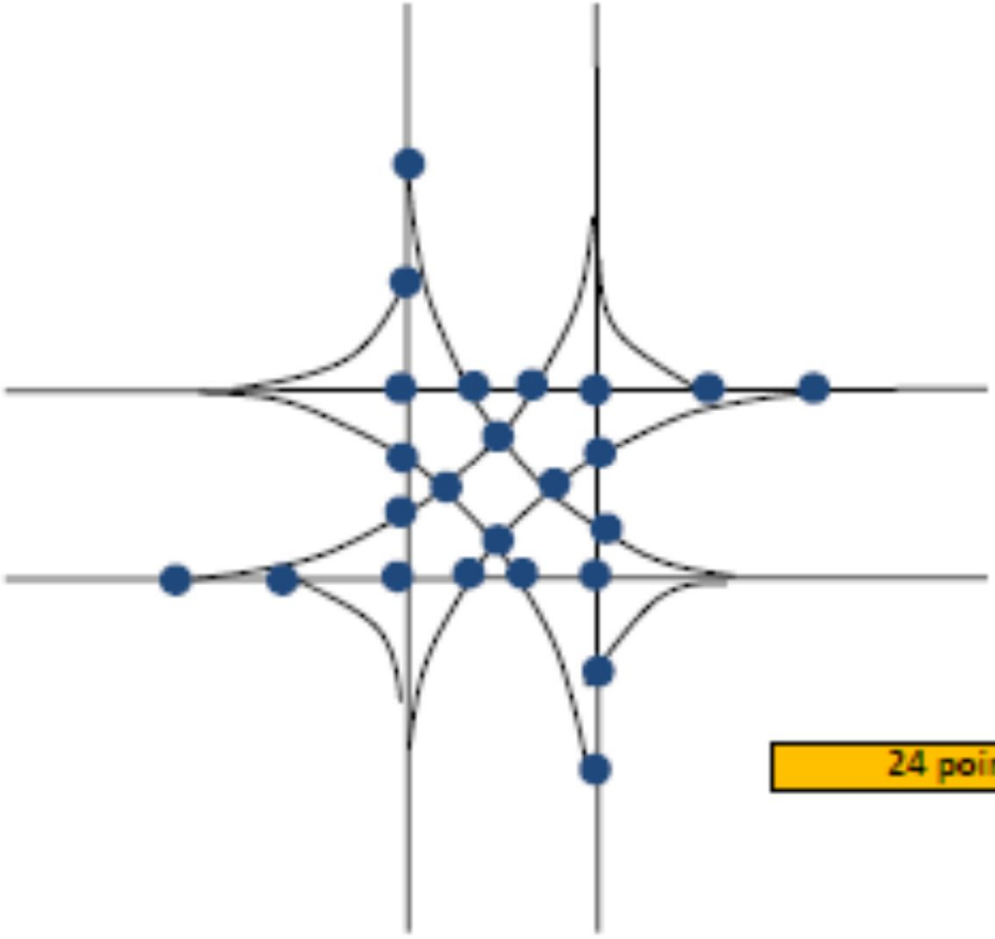
- FOCUS more on "Road Safety Engineering"
- Enforcement, Education is important
- But, Road Safety Engineering is the basic approach to minimize "CONFLICTING POINTS"
- Road Safety Engineering channelize vehicle and people into safer transition minimizing the scope of "HUMAN ERROR"



FOCUS

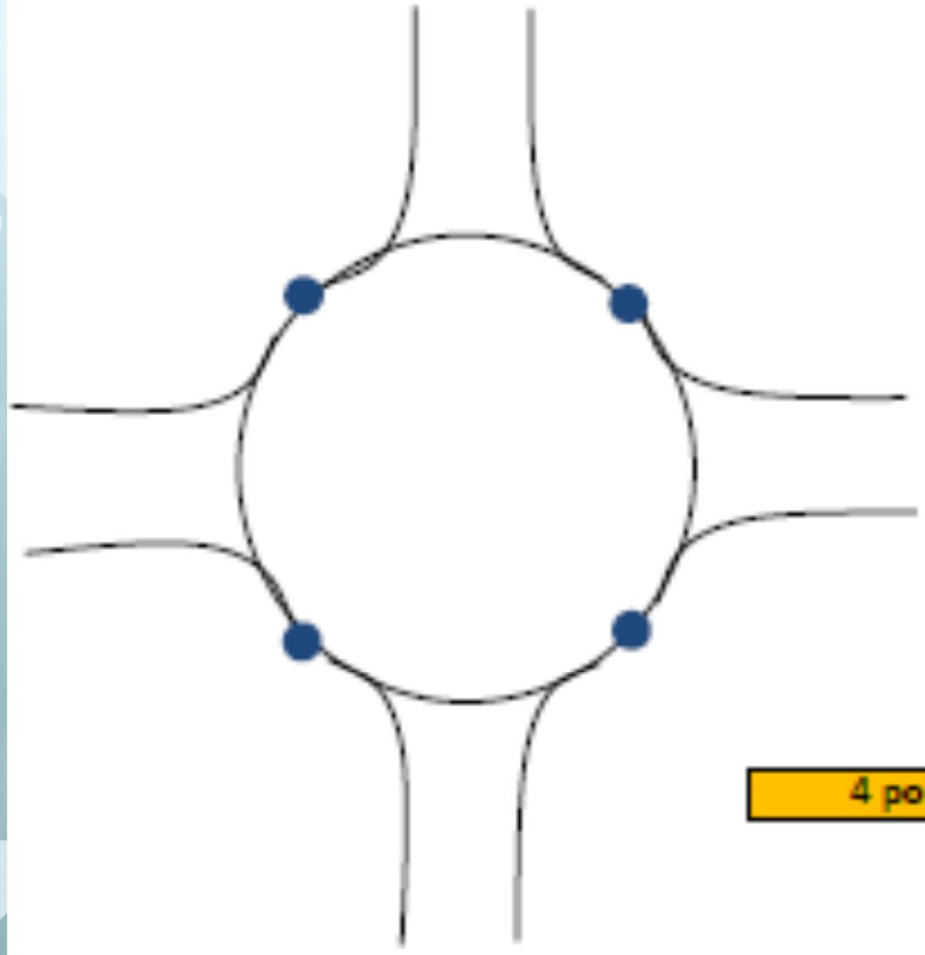
- HUMAN Error in roads is a product of WEAK PLANNING of roads
- Improvement in RSE will reduce the scope of Human Error
- Education, Awareness is important, but RSE related PLANNING is more important
- Engineering Departments should FOCUS more in RSE

An Example :



The fewer conflict points – the safer!

24 points of major conflict



The fewer conflict points – the safer!

4 points of major conflict

Road Safety Engineering in Rural Roads: Important issues

Traffic Signs

- Traffic Signs are very basic requirement for a safer road
- All new road construction should include traffic signs, Kilometer posts, Name Plate.
- In addition to road safety, these are called road furniture that adds beauty and value to the roads.
- A new, comprehensive Road Sign Manual is going to be developed with the assistance of RTIP-II (in Bangla)

Road Marking

- Road Marking is very important to keep the vehicle on the road particularly at night
- They are equally important at busy roads, on road humps, markets, schools and junctions
- There is no minimum road width to start road marks (We have a misconception -18 ft.)

Road Marks

- In 18 ft. road, it works to

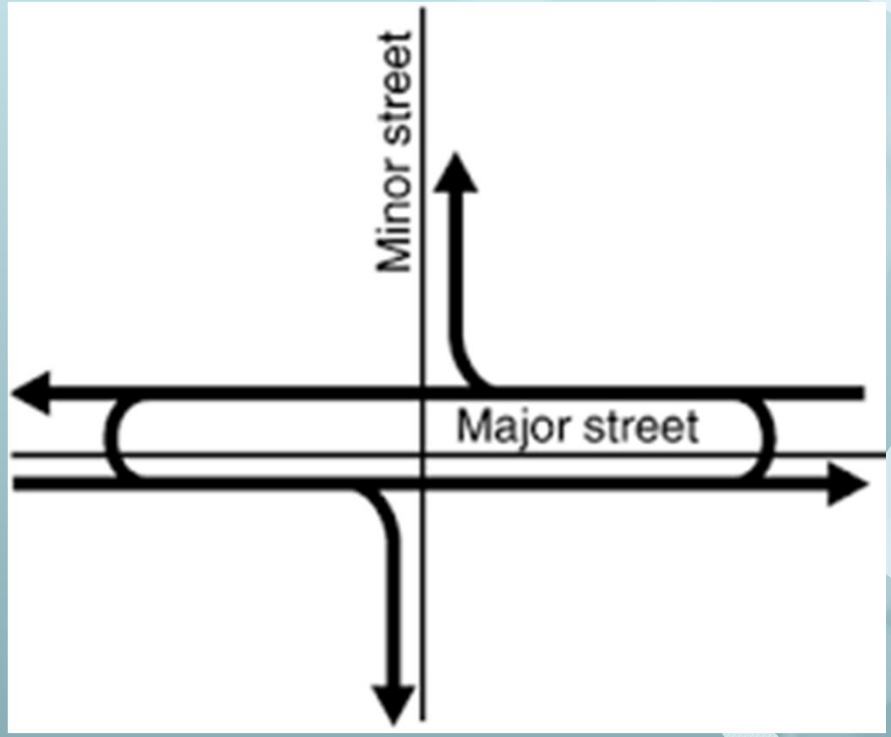
  Keep the vehicle in lane
- In 12 ft. road, it works for safe overtaking

Road Marks & Traffic Signs

- Both, traffic sign and road marks may cost 2-3% of total cost adding more value and beauty to the road.
- Saving lots of precious lives and their families
- Adding more to GDP

Intersection

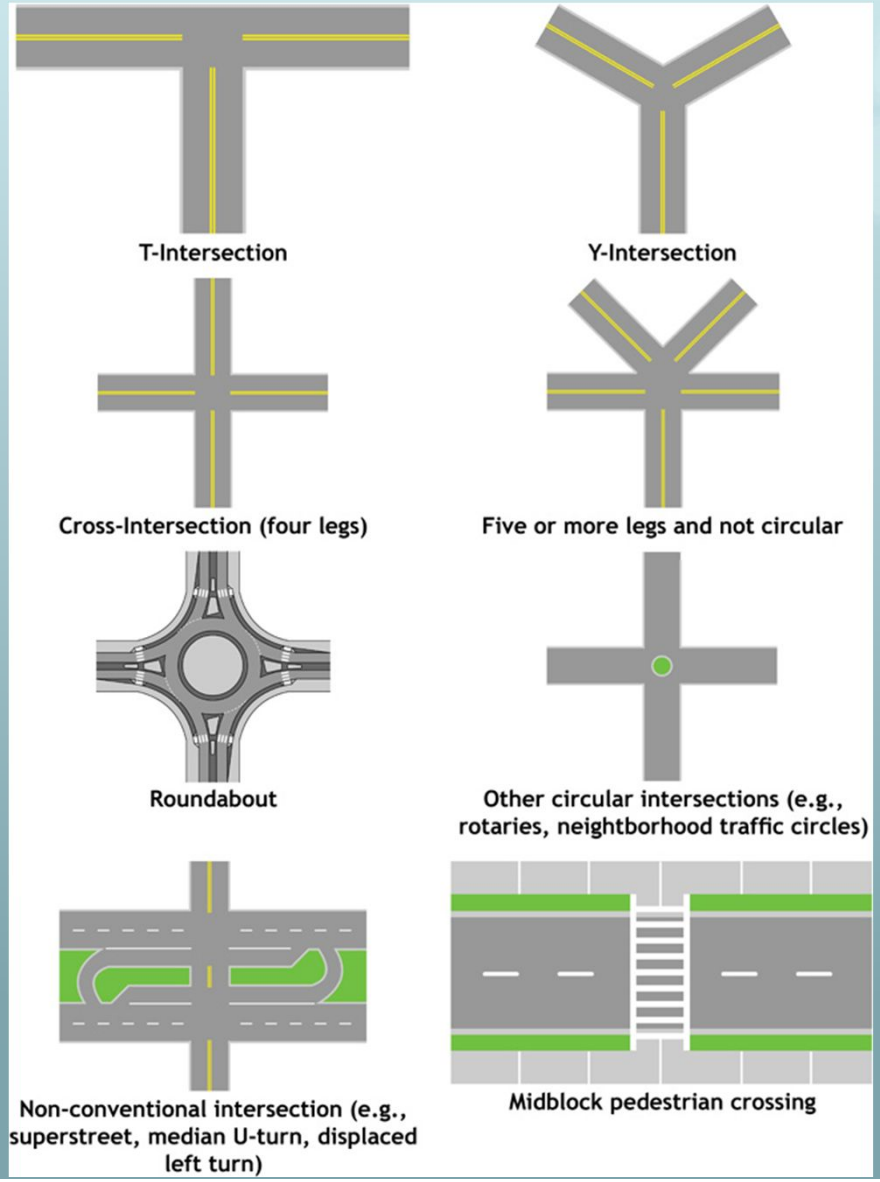
- The junction points to meet higher LGED or RHD roads
- Intersections are the weakest point in LGED roads
- We use ‘Y’ intersection that are very dangerous



Intersection

- Unsafe intersection increases accidents
- Reduces speed/overall service of the roads
- Intersection/Junction treatment (Providing GIVE WAY, SIGNs, VISIBILITY) in rural roads is very important

Y Versus T intersection



Why Y intersection are unsafe

- Relative Impact Speed is higher for Y junction
- Momentum of Crashes are severe in Y than T junction

2 Relative impact speeds

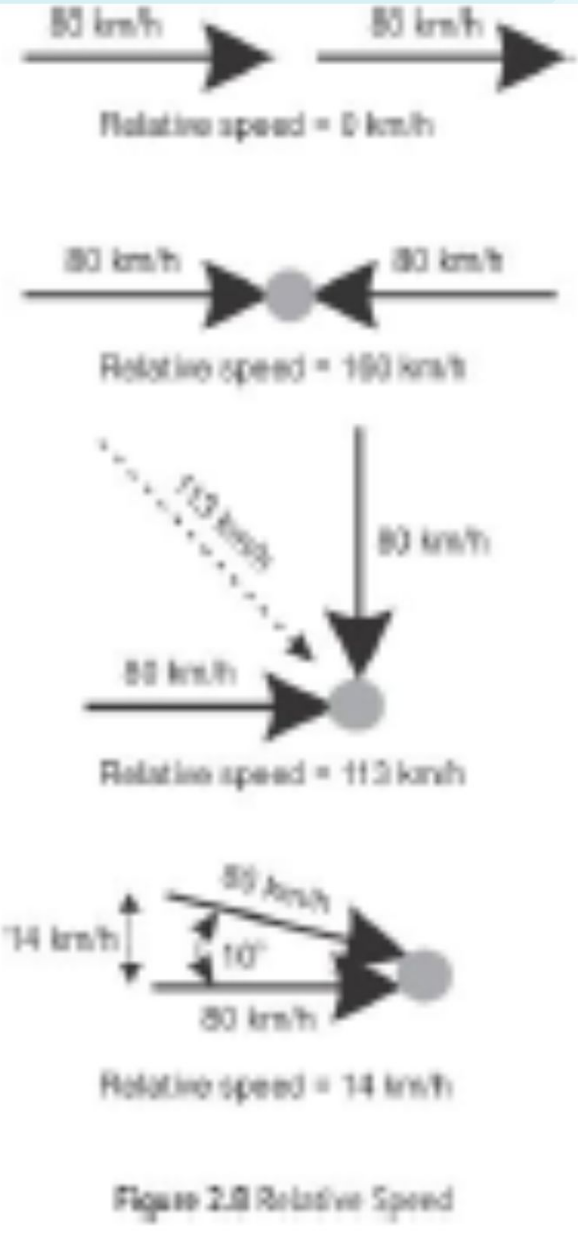


Figure 2.8 Relative Speed

2 Relative impact speeds

Y junctions are very dangerous

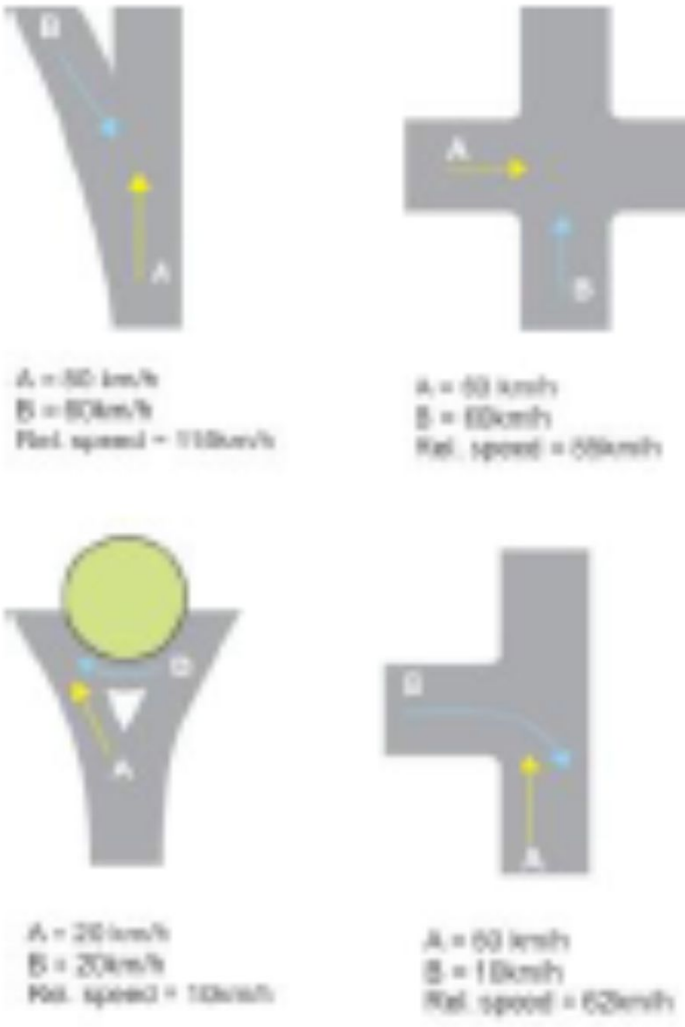


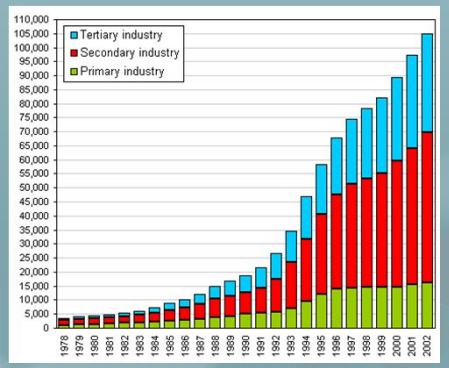
Figure 2.9 Relative Speed at Intersections

Important Road Safety Issues

- Dhaka-Chittagong, Dhaka-Mymensigh Highway is going to be four lane
- Designed speed 80 Km ++
- The 4 lane will lose its speed if the intersections of LGED roads are not treated properly
- It will also contribute to lots of regular accidents
- Separate Projects should be undertaken for LGED roads (RHD will treat their intersections only)

Important Road Safety Issues

- All Intersection of LGED roads should be carefully designed.
- Intersection development is costlier, may increase 3-4% of total cost.
- A total of 5-6% cost (Signs, Marks, Intersection) can add value to rural roads
- Also can add value for the lives of Rural People
- Can Add to National GDP

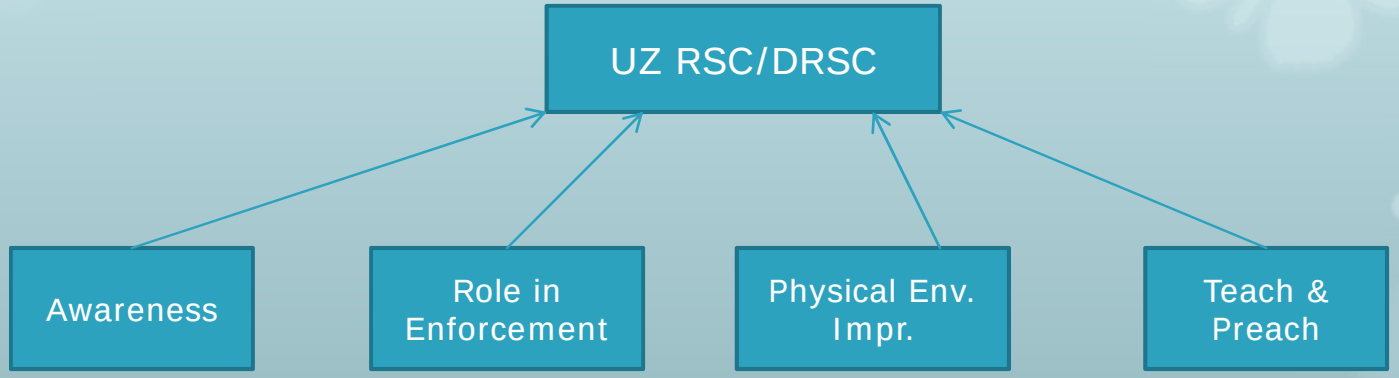


Awareness Building & Enforcement

Capacity building

- Capacity Building of Upazila Road Safety Committee
- Capacity Building of District Road Safety Committee
- Capacity Building of Union Parishads

Upazila/District Road Safety Committee



School Education Programme

- The best way of creating awareness is through school
- The sanitation programme of the government was successful through school
- RTIP-II is planning to spread Road Safety Education in the Primary Schools of project districts
- A teacher from each school will be trained
- BRAC might be the Partner Organization.

7th Five Year Plan & Road Safety

- For preparation of 7th Five Year Plan, Perspective Plan, Vision 2021, Election Manifesto and all other planning documents have been reviewed.
- Road Safety is important considering all the aspects
- It is crucial for Economic Growth, Poverty Reduction, Livelihood Improvement
- Even, most important for developing a "NATIONAL IMAGE"
- "Road Safety" projects have been proposed in 7FYP.


THANK
YOU

Enforcement & Education


Road Safety
Make it happen
SAFER ROADS FOR ALL


40
Lajur Terputus
40
Lajur Terputus


PEMBERITAHUAN
AKAME RESTAURANT
Sedang di RENOVASI,
SEMENTARA PINDAH KE
TERMINAL INTERNATIONAL
PELABUHAN BENOA
JASA RAHARJA
SAFER ROADS FOR ALL
SAFER ROADS FOR ALL

2 Relative impact speeds

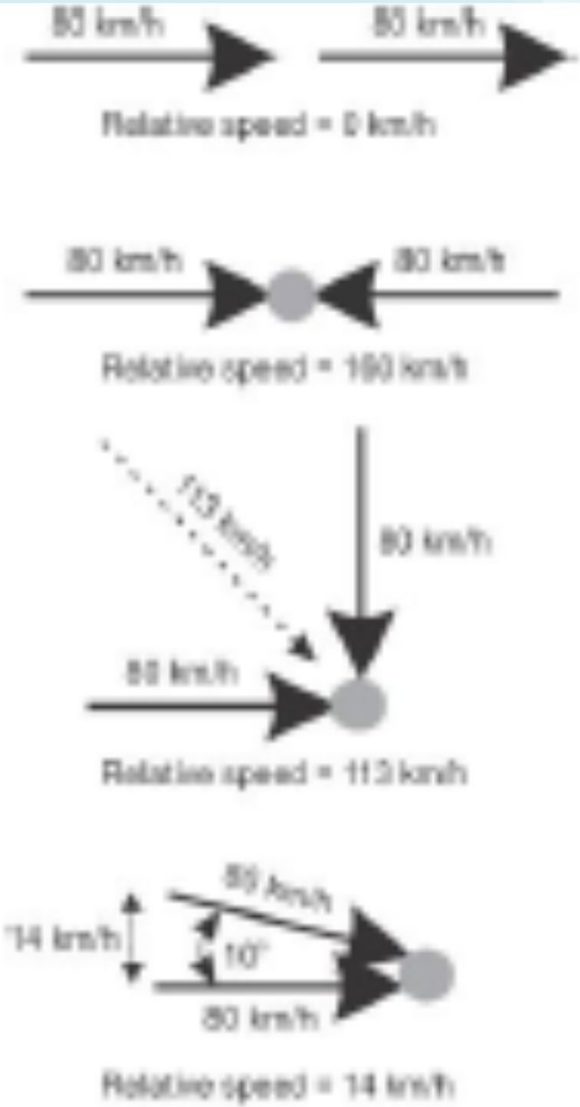


Figure 2.8 Relative Speed

2 Relative impact speeds

Y junctions are very dangerous

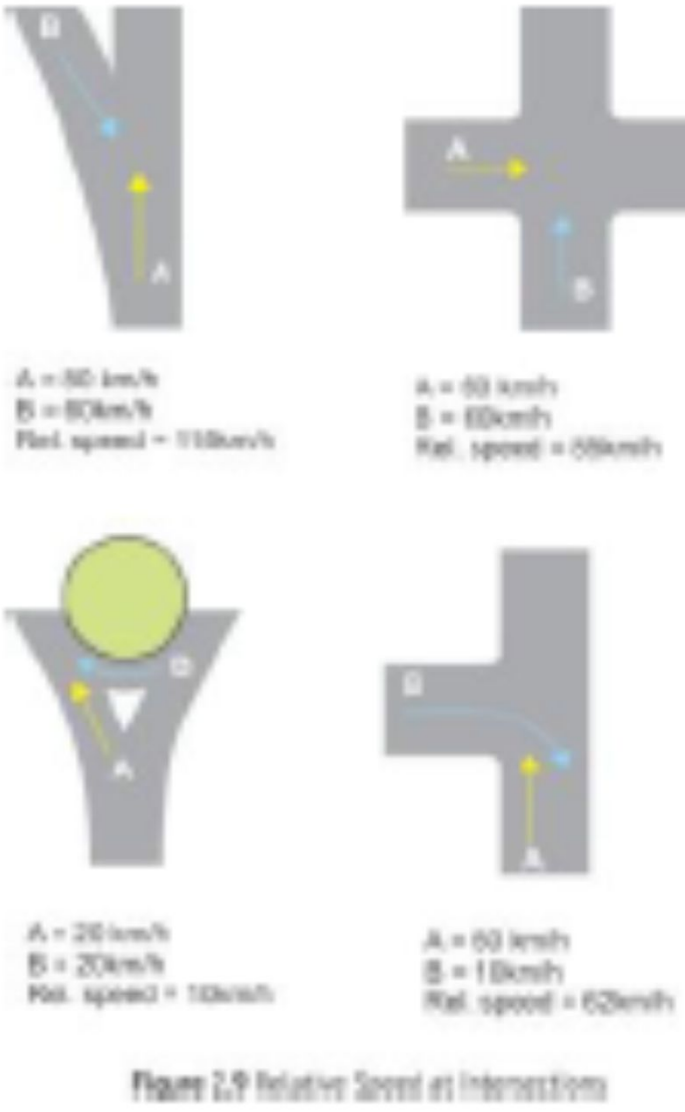


Figure 2.9 Relative Speed at Intersections

সড়ক দুর্ঘটনা এড়াতে হলে রাতে চলাচলকারী যানবাহন ও যাত্রী/পথচারীদের নিরাপত্তার জন্য

বাস ও ট্রাকে রিফ্লেক্টর ব্যবহার করুন

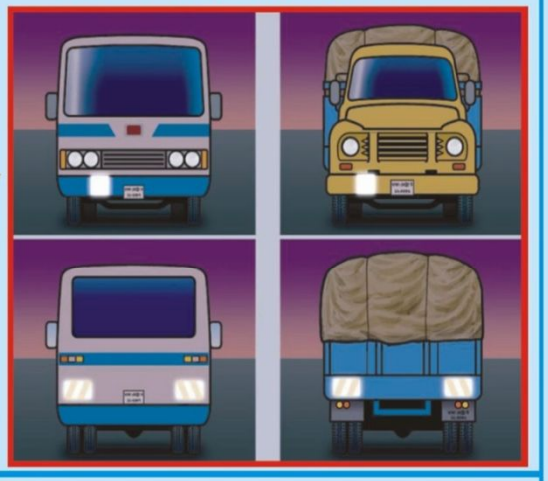
মোটরযানে সঠিক স্থানে রিফ্লেক্টরের ব্যবহার

৪″

৪″

৪″

রাতে যানবাহনে রিফ্লেক্টরের প্রতিফলন



সামনে রিফ্লেক্টর লাগাতে হবে

৩″

৩″

পিছনে বামদিকে রিফ্লেক্টর লাগাতে হবে

৭.৫″

৭.৫″

পিছনে ডানদিকে রিফ্লেক্টর লাগাতে হবে

সড়ক নিরাপত্তা প্রচারাভিযান

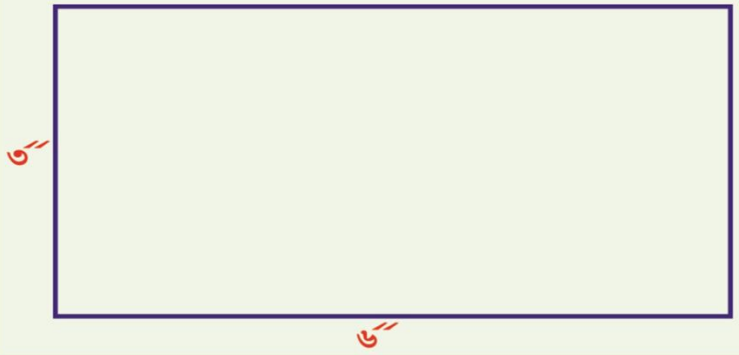
দ্বিতীয় গ্রামীণ অবকাঠামো উন্নয়ন প্রকল্প (রিপ-২)

স্থানীয় সরকার প্রকৌশল অধিদপ্তর (এলজিইডি)

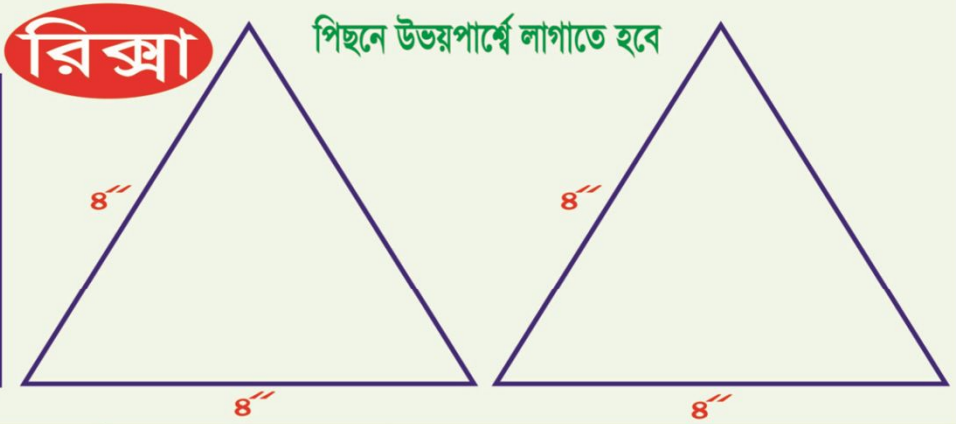
রাতে চলাচলকারী যানবাহন যাত্রী ও পথচারীদের নিরাপত্তার জন্য রিফ্লেক্টর ব্যবহার করুন

রিক্সা

সামনে লাগাতে হবে



পিছনে উভয়পার্শ্বে লাগাতে হবে



রিক্সার সামনে আড়াআড়িভাবে সাদা রিফ্লেক্টর লাগাতে হবে।

রিক্সার সামনে সাদা রিফ্লেক্টর লাগানো অবস্থায় দেখা যাচ্ছে।

রাতে রিক্সার সামনে রিফ্লেক্টরে আলোর প্রতিফলন দেখা যাচ্ছে।

রিক্সার পিছনে রিফ্লেক্টর লাগানোর জন্য পরিষ্কার করা হচ্ছে।

হলুদ রিফ্লেক্টর রিক্সার পিছনে উভয় পার্শ্বে লাগাতে হবে।

রাতে রিক্সার পিছনের রিফ্লেক্টরে আলোর প্রতিফলন দেখা যাচ্ছে।

সড়ক নিরাপত্তা প্রচারাভিযান

দ্বিতীয় গ্রামীণ অবকাঠামো উন্নয়ন প্রকল্প (রিপ-২)

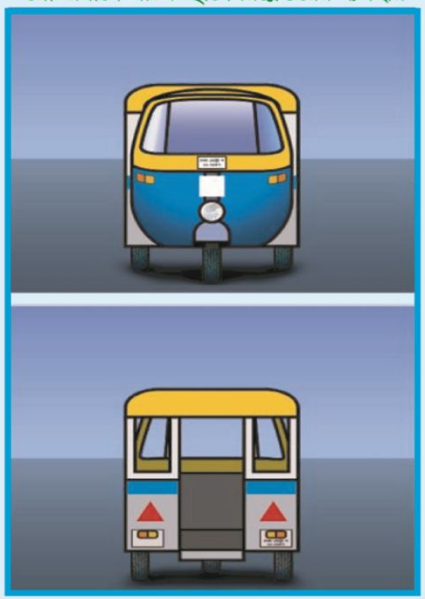
স্থানীয় সরকার প্রকৌশল অধিদপ্তর (এলজিইডি)

ADB kfw gtz

সড়ক দুর্ঘটনা এড়াতে হলে রাতে চলাচলকারী যানবাহন ও যাত্রী/পথচারীদের নিরাপত্তার জন্য

টেম্পুতে রিফ্লেক্টর ব্যবহার করুন

মোটরযানে সঠিক স্থানে রিফ্লেক্টরের ব্যবহার

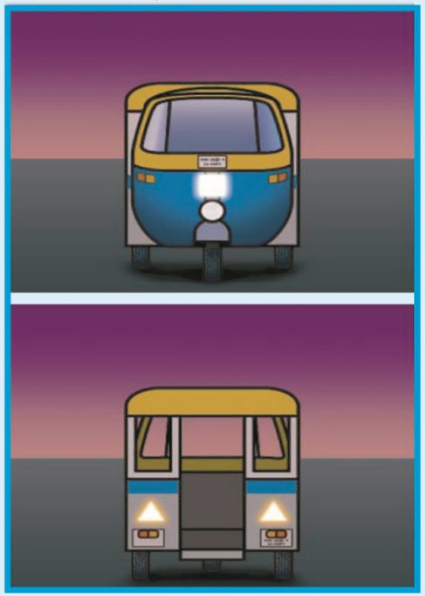


৪″

৪″ ৪″

সামনে রিফ্লেক্টর লাগাতে হবে

রাতে যানবাহনে রিফ্লেক্টরের প্রতিফলন



৪″ ৪″

৪″ পিছনে বামদিকে রিফ্লেক্টর লাগাতে হবে

৪″ ৪″

৪″ পিছনে ডানদিকে রিফ্লেক্টর লাগাতে হবে

সড়ক নিরাপত্তা প্রচারাভিযান

দ্বিতীয় গ্রামীণ অবকাঠামো উন্নয়ন প্রকল্প (রিপ-২)

স্থানীয় সরকার প্রকৌশল অধিদপ্তর (এলজিইডি)

ADB kfw gtz