



## SAFETY BULLETIN: Defensive Driving Best Practices

**Concrete Saskatchewan member companies value safety and strive to make it an integral part of their operations. Safe on-road behaviours not only benefit the Ready Mix operator, but also all of those living in the communities we serve.**

**Driving defensively is the best way to avoid being involved in an on-road incident.**

A defensive driver is one who can make allowances for the lack of skill or improper attitude of the other party, and make quick calculated decisions to avoid conflict. The defensive driver is always working to gain better information from their operating environment to allow themselves more time and space to make decisions. The defensive driver is always more concerned with being safe versus being right, and will give away his/her right-of way to avoid an incident.

There are many defensive driving courses on the market and each has its own unique approach to the topic. The most important thing to remember is that driving defensively is a skill set that must be practiced and applied on an ongoing basis, and that the techniques apply to any sized vehicle.

Many members of the public are not aware of the challenges associated with operating heavy commercial motor vehicles such as Ready Mix trucks. Some assume that because the Ready Mix drivers sit up high that they can see everything clearly and that these vehicles have larger brakes so they can stop quickly. We all know this not to be the case.

Concrete Saskatchewan has assembled this guidance document for its members to provide some best practice techniques and solutions to some of the challenges we all encounter when operating our fleets.

### **5 KEYS TO DEFENSIVE DRIVING**

#### **Looking Ahead**

Drivers must strive to look as far ahead of their vehicle as possible. This will allow them to effectively utilize their peripheral vision to take in the movements and changes occurring in the areas in front and to the side of their vehicle.

When a driver is actively scanning the road ahead and detects another vehicle (such as a cyclist) operating on the right edge of the lane in front of them, they will have adequate time to decide how to best deal with the upcoming interaction and still maintain a safe zone around their vehicle

#### **Following Distance**

Maintaining an 8-10 second following distance from the vehicle in front of you will allow adequate space and time to make decisions and/or take evasive action.

We discussed the value of looking as far ahead as possible, but this is not practical when you are following another vehicle too closely. Your attention is always drawn to and fixed on the vehicle directly in front because we instinctively know that if they brake suddenly, we will not be able to slow our larger vehicle in time to prevent an incident.

Maintaining the space in front of your vehicle will decrease the chances of an on-road incident and as a result help to decrease the stresses associated with driving commercial motor vehicles.

Some cyclists may be intimidated by the size and weight of Ready Mix trucks. When sharing space with them on a roadway, be sure to leave them as much space as possible. They can stop quickly, therefore an adequate following distance is a must! If you plan to pass the cyclist, ensure that your path is wide so that they will not be affected by the wind forces generated by your vehicle.

### **Mirrors**

Having a good awareness of what is occurring in front of the vehicle is important, but equally important is the operating environment behind the vehicle. Having the correct mirrors and ensuring they are adjusted properly will provide the driver with an early warning system to detect potential problems approaching from behind.

Once the driver has safely passed the cyclist operating on the right edge of the lane, he/she must continuously check their mirrors to track the cyclist's activities to ensure that they are not operating too close to our vehicle or creeping up on the right side while we are attempting to make a right hand turn.

### **Space**

Space is the most valuable commodity for the defensive driver. It allows us more time to make decisions and allows us to have greater visibility of the environment around us.

Utilizing all of the elements listed above will provide the Ready Mix driver with more information earlier. It will allow them time to make better use of that information and maintain a space cushion on all 4 sides of their vehicle.

Maintaining adequate space around your vehicle allows the driver to focus on the environment as a whole – not constantly focus on single items that detract from your overall situational awareness.

When a cyclist is operating on the edge of the right lane you are driving in, they become the focus. They travel up and down the right side of your vehicle as you pass them and they pass you. The defensive driver will share the road with the cyclist and focus their efforts on ensuring that they maintain an adequate following distance behind the cyclist. When it is safe to do so they will respect the cyclist's right to share the road and give them lots of space to safely operate. Once safely in front of the cyclist the Ready Mix driver will monitor the cyclist's movements utilizing their multiple mirrors.

### **Communication**

Communicating with those around us helps to ensure that our intentions are understood. We sometimes use eye contact, hand gestures, lights, turn signals, and horns to get someone's attention and let them know what our wishes or intentions are. These are all good tools and help to make the roads safer, however it is important to remember that the defensive driver is one who makes allowances for the lack of skill or improper attitude of others. Just because the other motorist, cyclist, or pedestrian has attempted to communicate with you (or acknowledged your communication), it does not mean that the intention was fully understood by both parties

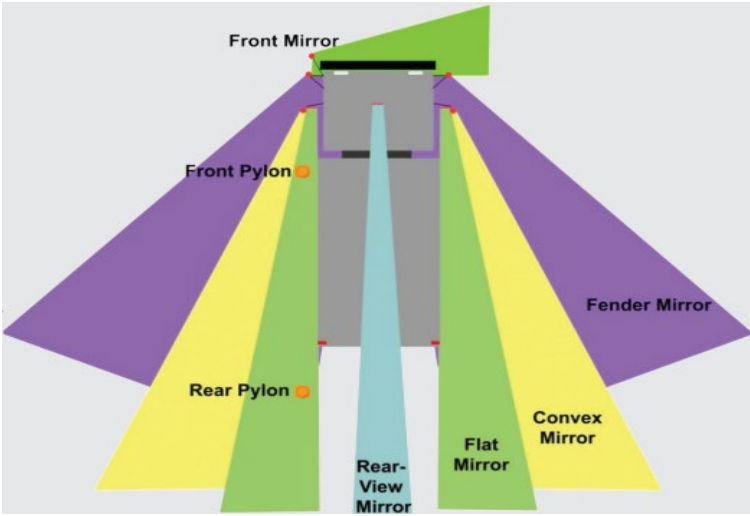
## **MIRROR SET-UP & ADJUSTMENT**

Having an effective mirror set-up and adjusting them properly can greatly reduce the potential of an on-road incident. They will also provide the Ready Mix driver with a huge amount of information by greatly reducing the blind spots around the vehicle.

The configuration shown below is sometimes referred to as the 3 Mirror Set Up. It expands on the flat (west coast) and drop (convex) mirrors found on both the driver and passenger doors by adding a tripod convex mirror on each fender, and a single arm convex mirror mounted on the front drivers side of the truck.



The goal of this mirror configuration is to adjust the mirrors so that objects can transition from one mirror field-of-view to the next, thus allowing the Ready Mix driver to track the movement of vehicles and pedestrians around their truck



(Note: The rear view mirror shown here would not necessarily apply to Ready Mix trucks, however might apply to other vehicles in a Commercial Fleet.)

Mirror adjustments are driver specific. Utilizing 2 pylons can allow the driver to make the necessary changes to provide the maximum awareness and minimize the blind spots around the vehicle.

Start by placing one pylon approximately 10' behind the flat mirror on the driver's side and spaced approximately 12" from the side of the vehicle. Then place the second pylon in-line with the first pylon approximately 10' behind the vehicle. This process will be repeated on the passenger side

**Flat (West Coast)**

Adjust the Flat (West Coast) Mirror on the door so that you can see the side of your vehicle on the inside edge of that mirror. Further adjust it so that the rear most pylon appears in the middle to lower half of that same mirror.

**Convex (Drop)**

Adjust the Convex (Drop) Mirror on the door so that you can see the side pylon in the lower inside corner and also see the rear pylon in the upper inside corner.

**Fender (Tripod)**

Adjust the Convex Fender Mirror (Tripod) so that you can see the side pylon in the middle and also see the rear pylon at the upper edge.

**Front (Single Arm)**

Adjust the Front (Single Arm) Convex Mirror so that you can see the entire front bumper of the vehicle and the areas below both of the Convex (Tripod) Fender Mirrors

Proper mirror set-up and adjustment will allow vehicles and pedestrians to cascade from one mirror to another as they move around your truck.

When a vehicle passes you from behind you can first track it in the Flat (West Coast) Mirror. As it moves along side your Ready Mix truck it will transition to the Convex (Drop) Mirror on the door. The Convex Fender Mirrors (Tripods) provide a wide view which will show both the lane beside your vehicle and a wider view of other areas (such as adjacent lanes of traffic).

The Front (Single Arm) Convex Mirror highlights the area at the front of the Ready Mix truck. This allows the driver to be aware of any cyclists or pedestrians operating in that area (at cross walk or traffic lights) or hazards in front of the truck while discharging at a job site. Construction sites tend to be dynamic environments where the people and equipment can move many times before the Ready Mix driver has finished discharging his load.

**CYCLING AWARENESS**

Driving defensively is incredibly important. The defensive driver works to constantly gain more and better information. Having a basic understanding of the various cycling infrastructure elements we may encounter on-road, will have a significance on the meaning and quality of the information we are processing.

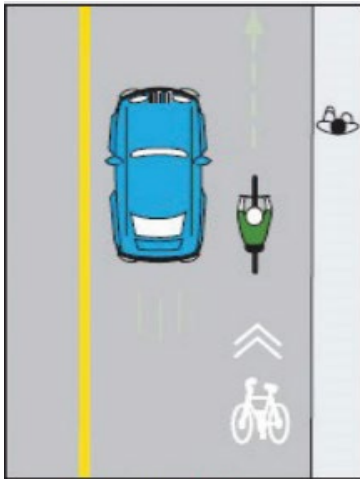
**Hand Signals**

Some bicycles and e-bikes are equipped with lights and turn signals which motor vehicle operators can easily identify and understand, however in order to ensure effective communication the basic hand signals must be understood.



## Sharrows

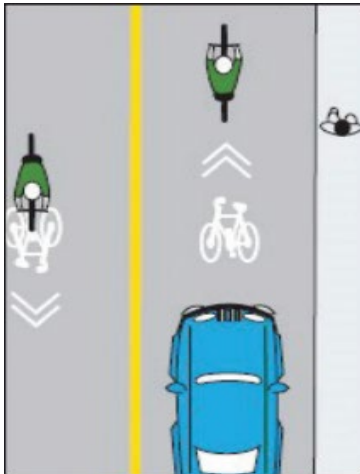
"Sharrow" pavement markings highlight the best positions for cyclists on a given roadway. Unlike a dedicated bike lane, ALL vehicles can operate here which includes the ability to stop or park in those zones



### Side-By-Side Sharrow

When a street is wide, the sharrow markings tend to be positioned on the right side of the active traffic lane near the curb giving cyclists some dedicated space of their own to operate.

These indicate the best position for cyclists on a roadway. It is important to remember to share the road with the cyclist and utilize the 5 Keys to maintain space around your vehicle and not to crowd the cyclist operating in that area.



### Full Lane Sharrow

When a street is narrow, the sharrow markings tend to be positioned in the middle of the active traffic lane.

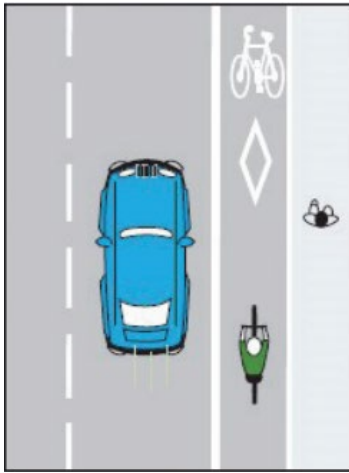
This marking directs all vehicles (including bicycles) to travel in single file.

## Bike Lanes

Bike lanes are dedicated parts of the roadway and must be treated as separate lanes of traffic. The diamond marking inside the bike lanes designates it as a 'reserved lane'.

Blocking these lanes even for a moment is prohibited (except for Emergency vehicles, public transit, and utility related service vehicles).

There are two types of bike lanes. Understanding the differences between them will help ensure safer interactions with cyclists.

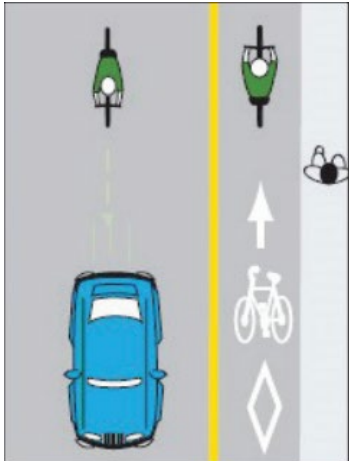


### Traditional Bike Lane

A traditional bike lane is positioned on the right side of the road and has a solid white line along the left side with diamond and bike markings to clearly illustrate that it is dedicated for bicycle traffic.

These lanes are designed for cyclists to travel in the same direction as traffic.

When the solid white line on the left side of the lane is dashed, it means that motor vehicles may merge into this lane to make a right hand turn.



### Contra-Flow Bike Lane

A contra-flow bike lane is similar to a traditional bike lane in that it is positioned on the right side of the road, but it has a solid yellow line along the left side with diamond and bike markings to clearly illustrate that it is dedicated for bicycle traffic.

These lanes are designed for cyclists to travel in the opposite direction as traffic. Cyclists wishing to travel in the same direction as traffic will be sharing the mixed-use active traffic lane.

### Bike Boxes



Bike Boxes are a new kind of street marking to help motorists and cyclists share the road. Bike boxes are used at intersections to designate a space for cyclists to wait in front of cars at a red light and then proceed first through the intersection when the light turns green. Once they clear the intersection they resume travelling in the bike lane.

At red lights, the motor vehicle drivers must stop at the stop line behind the bike box.

When bikes clear the intersection ahead of cars, they are more visible, and less likely to get stuck squeezing around a right turning vehicle, and

that's safer for everyone.

We hope that all Concrete Saskatchewan members will share this material with their teams and reinforce the benefits of driving defensively. A clear understanding of the rules of the road and the increased information and awareness provided by utilizing the defensive driving tools listed above, will

help to ensure less stressful and safer interactions with cyclists.

## **ADDITIONAL RESOURCES**

Below is a comprehensive list of vehicle technology, equipment and resources that can be used by Concrete Saskatchewan members to assist in improving on-road awareness and blind spot reduction.

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### **In Cab/Front Facing Cameras**

<http://www.lytx.com/our-solutions/drivecam-programs>

<http://www.smartdrive.net/>

<https://www.peoplenetonline.com/>

<http://www.dicaninc.com/>

### **Convex Mirrors**

<http://www.m-cna.com/>

<http://www.roscomirrors.com/>

### **Back Up Cameras**

<http://www.silvertopsupply.com/mobile-safety-intro>

<https://www.peoplenetonline.com/>

### **Defensive Driving**

<http://drivewisesafety.com/programs/commercial-fleets-program/>

<http://www.smith-system.com/>

<http://www.alertdriving.com/home/index.php>

<http://www.ihsa.ca/>

Resources: Concrete Ontario

[www.concretesask.org](http://www.concretesask.org)