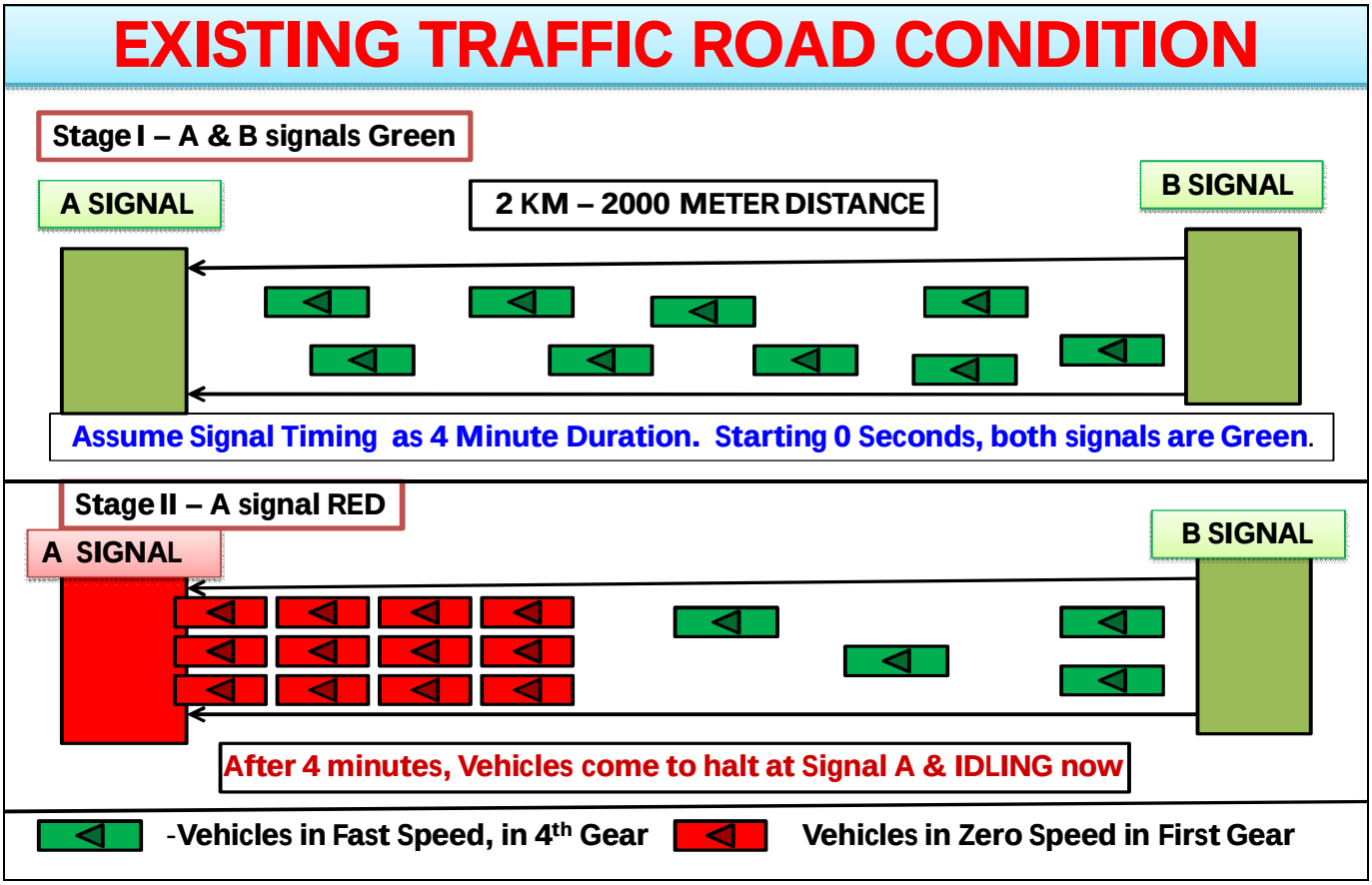
REDUCE ROAD TRAFFIC POLLUTION TODAY by Improving TRAFFIC ARRANGEMENTS

One of the reasons for road Pollution is mainly due to idling vehicles in the traffic signals. Let us fine tune the traffic arrangements by elongating the traffic density so as to make vehicles move slowly instead of zero speed. In this article, I am suggesting to introduce Slow Speed Signal post to act as Slave to the existing road signal, as Master controller. It is a question of vehicles racing against time when road is free. Instead of flying faster on the free roads and congesting heavily at the signals, this proposal will allow the vehicles to shift between fast and slow speeds only on the roads, and will avoid zero speed idling of vehicles at traffic signals. This proposal will extend the existing signal point of say 50 meter length to a Two Stage signal of say 1000 meter length.

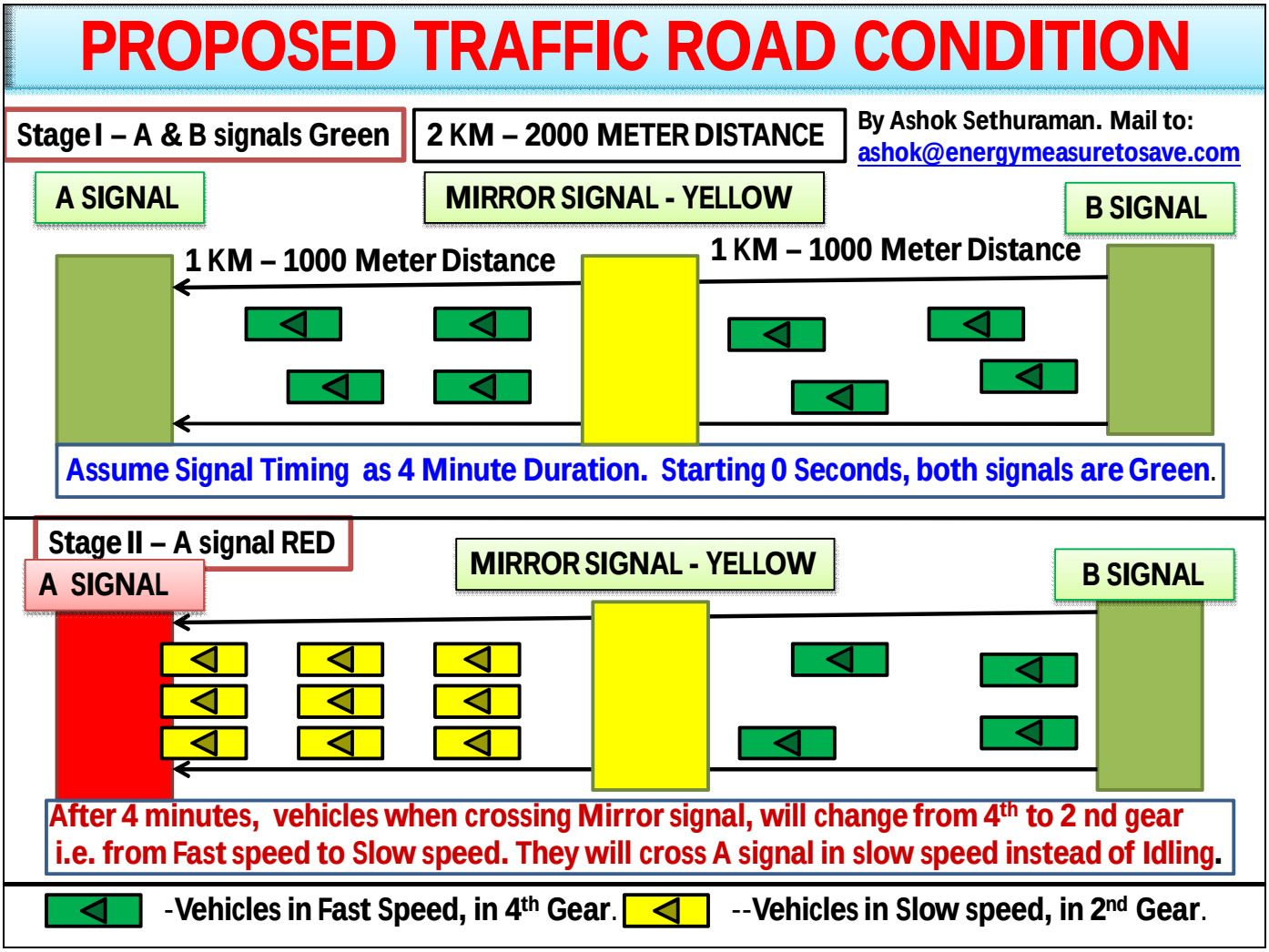
ELONGATE THE ROAD VEHICLE TRAFFIC QUE HORIZONTALLY:-

To curb the pollution, it is a team work of individuals, the regulating authorities and the Govt. Let us also think of how to decongest the traffic in roads especially due to the idling vehicles in traffic signals.



1. The above Power point Images illustrate the Idling vehicles in the existing signal and in the next image, we propose to introduce Slow Speed Signal Post as Mirror Signal and make the vehicles to run at slower speed say for many hundred Meters and cross the existing signal at slower speed instead of zero speed idling.
2. Let us presume that the existing traffic signals named A and B are there at say, 2000 meter interval on this road. (This is an example and figures are meant to visualize only).

PROPOSED TRAFFIC ROAD CONDITION



EXISTING ROAD TRAFFIC OF IDLING VEHICLES AT SIGNAL A: -

3. Presently, the vehicles when the road is free in between the signals, run in 4th gear above 40 to 60 KMPH. But when nearing the signal, the same vehicles go to First gear at zero speed and keep the vehicles IDLE for longer minutes.
4. The idling vehicle's combustion is very poor, and they exhaust heavy fumes of smoke and other chemicals. The pool of vehicles idling, say around 100 meters distance nearing the signal run short of road space, have congested movements, and due to zero speed pollute all the more. The exhaust fumes per M3 is heavy, dense engulf the total area of 100 meter near to the signal, making the visibility conditions, breathing conditions all the more WORSE.

PROPOSAL DETAILS TO INTRODUCE SLOW SPEED SIGNAL POST IN BETWEEN:-

5. Here, we suggest to the Traffic Regulator to introduce one more mirror traffic signal say at half the distance prior to signal A at say, 1000 meters. This point will have Red, yellow and green lights on the signal post. This signal will follow the signal A conditions and act as Mirror signal, let us name this as ASHOKA signal.
6. That is A signal is Master type controller and the proposed Ashoka signal will be Slave type to the A signal.
7. The signal timing duration of signal A is assumed as 4 minutes for green, 4 minutes for Red, say 240 seconds.
8. To start with at 0 seconds, A and B signals show green light and allow the normal traffic smoothly. Now 4 minutes over and the cycle starts from A signal and show Red light now.

9. If the signal A starts to show red say starts at 0 seconds, Mirror Ashoka signal will show from green to Yellow.
10. Once yellow is ON, the fast moving 4th geared vehicles are asked to reduce second gear and run at 20 KMPH.
11. So it will take around 4 minutes to reach from Mirror Ashoka signal to A signal 1000 meter distance, the vehicles will slowly move in second gear at snail's pace as long as A is in Red position.
12. By that time say after 4 minutes, A signal will be green and be ready to receive the slow moving vehicles.
13. By this road movement, we are ensuring no vehicle is idling at zero speed at traffic signal junctions.
14. This will decongest the signal, elongate the traffic from say from 100 Meter long idling vehicles at one place will be pulled back to 1000 Meter and force vehicles to move slower & this will result in fuel saving as well.
15. As long as the subsequent signals are congested, then the vehicles will slowly move in second gear only. By this, we are not allowing the vehicles to idle at stand-still position and emit more exhaust fumes at one place.
16. This leads to Mirror Ashoka signal installation in between two existing signals and this will be meant for Green and Yellow lights ON to make vehicles SLOW or FAST. This will be named as SLOW SPEED SIGNAL Post.
17. If tried for a week and proven ok by trial and error of the distance and time duration, then the Authorities can erect a speed breaker with a sign board to show "SLOW SPEED ONLY'.
18. When the first few vehicles follow this by reducing from Fast to Slow speed, they can keep their Alert light blinkers ON till they go in slow speed upto the existing signal and then they can switch the blinkers OFF.
19. If the main road mirror signal is okayed by us, then we can think of adding this mirror signal to the side roads as well. So the existing signal A will be master controller. The Mirror Ashoka signal in the same main road which we are proposing now, and the proposed side road mirror signals will act as Slave to follow the signals timings of the master A signal. This is applicable to any city, any busy traffic main road and Not only for normal peak roads, but also for roads leading to railway level crossing post. For Railway crossing signal, timing only differs.
20. Later, we can make use of Traffic Density Sensors using In-situ Strain gauge type to be fixed on the road to know the vehicle density near the signals and accordingly operate the slow speed signal timing flexibly. That is the slow speed signal will be active during heavy traffic density during day & peak times, and can be put to Non-peak mode, when the operation is needed and at what time duration.

CONCLUSION:-

The reason for the traffic air pollution is due to the fact that the pollution gets concentrated in a localized place like traffic signals; the polluted air spreads horizontally to other places in the city. It is the law of nature that Pollution or for that aspect, any gas matter will always dissipate in sideways from its High concentration levels to areas of lower concentration levels. In Delhi, the threshold of pollution dissipation has already crossed the limits and hence this explosion. This can be applied to any metro city where the roads and signals are getting congested.

Last but the least, the result of putting this Mirror Ashoka Signal to each & every busy traffic signal results in

1. Reduction in traffic pollution arising out to congestion.
2. Lakhs of liters of Diesel, Petrol saving by avoiding or reducing the idling vehicles at signals.
3. Road users near signals can protect their lungs from choking, happening due to heavy fumes.
4. Same time for commutation, but now with smooth slow and fast speed shifting gears.
4. Reduction in daily accidents at signal when signal changes from red to green and vice versa.
5. Improvement in vehicle health conditions. 6. Road users are not allowed to press Panic Button at signals.

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