# **Traffic Control Devices**

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3 - G Review Could you imagine using the Highway Transportation System (HTS.) if there were no traffic control devices at all? No lines on the pavement! No signs! No signals!

Road signs and traffic signals are the visual vocabulary of all road users that facilitate the use of the H.T.S.. It is an evolving language that all road users are required to know. Fortunately, the vocabulary is based on shapes, colors, and symbols and once-learned, permits the understanding of signs that we may not know.

Attempts have been made to achieve world-wide standardization of this vocabulary in our global community. Until such time, we are responsible for interpreting these traffic control devices correctly, wherever, or however, you may use the HTS.



AFTER COMPLETING THIS CHAPTER, THE STUDENT MUST BE ABLE TO UNDERSTAND, IDENTIFY AND RESPOND TO:

- traffic signs, signals and pavement markings.
- traffic control persons.
- hand signals.



N ational standards for road signs have been set up by the National Joint Committee on Uniform Traffic Control Devices. Using shapes, colors, and symbols, as the basis of a clear and accurate language which is easily understood. It is a universal language that even the nonreader can decipher. Before studying these signs individually, some basic principles are:

- Sign **symbols** are generally read from the bottom towards the top
- Arrows indicate the direction of the flow of traffic
- A black shield indicates a fixed obstacle.



# THERE ARE FOUR CATEGORIES OF ROAD SIGNS

# 1- REGULATORY SIGNS doi:H and policy anippeni u

- Remind road users of specific rules (obligations, prohibitions, etc.) that apply in each traffic situation where they are posted.
- The background colors are red, white and d users that fadilitate the use of the H. Asald: is ng language that ail road users are required to

# 2- WARNING SIGNS

- Draw the attention to imminent danger or upcoming regulatory signs.
- The background color is yellow and fluorescent yellow-green.
- The diamond shape indicates the danger is up ahead. and one ow semit doug little va

#### **3- GUIDE SIGNS**

- Provide information. route markers, directions, destinations, services, points of interest or recreation, etc.
- The background colors are: BLUE + RED, WHITE
  - + BLACK, GREEN, BLUE, & BROWN.

# 4- CONSTRUCTION / WORK SITE SIGNS

- Draw the attention of road users to road repairs, detours, special road closing for sports events, etc.
- The background color is orange.
- The diamond shape indicates the danger is up ahead.

# 1 - REGULATORY SIGNS A SA TRUM THIS SUIT , SETSAND 2007 PARTELYMOD RETA

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Regulatory signs tell road users what they may or may not do in any specific area of the HTS. These signs are usually square or rectangular with black lettering or symbols on a white background, white lettering or symbols on a black background, or white lettering or symbols on a red background. Some regulatory signs are exceptions; they are :



The **STOP SIGN** is a red octagon with white markings. It requires a mandatory stop at the white line or before the crosswalk if there is no stop line. If there is neither a line or a crosswalk, stop before your vehicle reaches the cross street. Check that you may proceed safely after yielding to road users symbols, as the basis of a clear that do not have to stop.

The YIELD SIGN - a red and white triangle pointing downward - requires that you slow (stop if necessary - when traffic is close enough to present a hazard) and give the right of way to the other traffic. Proceed when you can do so without interfering with the flow of traffic.



The **WRONG WAY SIGN** indicates that traffic is moving in an oncoming direction on this roadway. It prohibits you from entering the roadway. If you are already on the roadway, steer off the traveled portion of the road and change direction as soon as you safely can.

The **DO NOT ENTER SIGN** prohibits you from entering the roadway. Traffic is moving in an oncoming direction on the roadway; it is either a one-way road or an exit ramp for an expressway.

A white rectangle with black lettering - **DO NOT PASS** - posted on the right side of the road indicates a no passing zone. A yellow pennant with similar lettering posted on the left is a highly visible warning of the same regulation. A white rectangle with black lettering - **PASS WITH CARE** - indicates the end of the no passing zone.

The **RAILROAD CROSSBUCK** posted a few feet from the railroad tracks is a white X with railroad crossing in black lettering. This sign obliges some road users to make a complete stop whether a train is coming or not. Passenger vehicles should slow down and check both ways carefully. Be prepared to stop in case a train is approaching or you are following a vehicle (school bus, vehicle transporting hazardous cargo) that is required to stop.

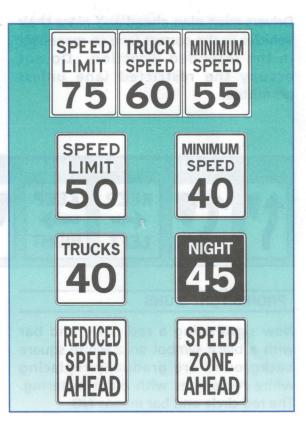
#### SPEED LIMIT SIGNS

The **ABSOLUTE** or **POSTED SPEED LIMIT** is the maximum or minimum speed at which you can legally drive in this zone based on road and normal traffic conditions. These are intended for ideal driving conditions.

BASIC SPEED LIMITS (unless otherwise posted)
Near parks and playgrounds, alleys
Business and residential areas
Designated work areas45 mph
Numbered Highways
Rural (Not numbered) - day60 mph
seven and a field - night
School buses / trucks

When road, weather, visibility, or traffic conditions are not ideal, the driver must determine the **BASIC SPEED LIMIT**; the safe speed for the existing conditions. (Minimum limits will no longer apply.)

**REDUCED SPEED** signs inform the driver that a lower speed is posted ahead; the driver should reduce speed to comply with the limit when he reaches the zone.





#### **ONE WAY SIGNS**

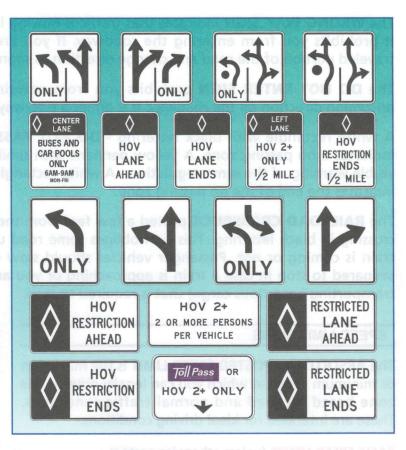
The **ONE-WAY SIGN** designates the direction of the flow of traffic. Signs at intersections, are posted on the near right and the far left corners or above the roadway where they are most visible to traffic from both directions.

Another indicator of a one-way street is the stop line which is painted from curb to curb (all the way across the street). 3

# LANE-USE CONTROL SIGNS

LANE-USE CONTROL SIGNS whether mounted at the side of the roadway or above the lane, are white rectangles with black arrows and lettering. They oblige the driver in the lane indicated to travel in the direction shown. They also restrict the use of the lane to certain vehicles. Both of these types of signs are usually accompanied by arrows and/or symbols painted on the pavement in the applicable lanes. (Example: HOV or High Occupancy Vehicle lanes see Page 3.14.)

Drivers must plan ahead and place their vehicles in the correct lane to maneuver in the intended direction. Do not occupy the restricted lane unless permitted.



# TRAFFIC DIRECTION SIGNS **KEEP KEEP** LEFT RIGHT

TRAFFIC DIRECTION SIGNS

Black lettering or symbols on a white background, these signs oblige drivers to pass on the indicated side of an obstacle or median in the roadway.

#### **PROHIBITORY SIGNS**

New signs using a red circle and bar with a black symbol on a white square background are gradually replacing white rectangles with black lettering. The red circle and bar means NO.

#### TURN PROHIBITION SIGNS

When used in conjunction with black arrows it prohibits a LEFT, RIGHT, or a U-TURN, or driving STRAIGHT AHEAD.

#### EXCLUSION SIGNS

When used with a black symbol, it prohibits the vehicle or road user represented by the symbol from entering or using this roadway.



NO HAZARDOUS MATERIAL **NO TRUCKS**  **NO SKATERS** 

# PARKING + STOPPING CONTROL SIGNS

These signs regulate the zones, times, and days where parking or stopping is permitted or prohibited. (Variations occur from one municipality to another.)

- Red No parking, standing, or stopping.
- Green Time limited parking.

PUSH BUTTON

TO CROSS

Ŕ

CROSS

ON

X

SIGNAL

CROSS

ON

GREEN

LIGHT

ONLY

PUSH BUTTON

FOR

Ŕ



### PEDESTRIAN CONTROL SIGNS

**PEDESTRIAN CONTROL SIGNS** remind pedestrians of the need to walk facing the traffic on rural roads where no sidewalks are provided; limit pedestrian crossing to safe places; and instruct pedestrians on the use of the traffic control lights.

### OTHER REGULATORY SIGNS

The **STOP HERE ON RED** sign is posted near some intersections with traffic lights. When the stop line is abnormally far from the corner, it indicates where you must stop your vehicle when the light is red.

PEDESTRIAN CONTROL

WALK

**ON LEFT** 

FACING

TRAFFIC

USH BUTTON

FOR

GREEN

PUSH

BUTTON

FOR

GREEN

LIGHT

PUSH BUTTON

TO CROSS

STREET -

WAIT FOR GREEN

PUSH

BUTTON TO

TURN ON

WARNING

CROSS

ONLY

AT

CROSS

WALKS

PUSH BUTTON FOR

2 SECONDS

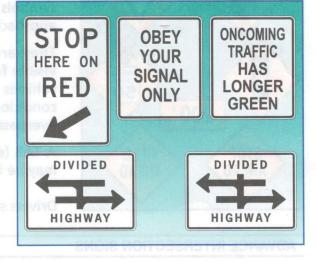
FOR EXTRA

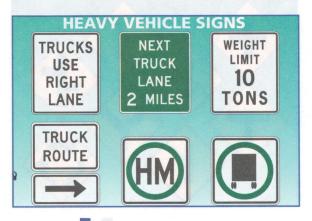
CROSSING

TIME

Signs may remind drivers to **OBEY YOUR SIGNAL LIGHT**, or that **ONCOMING TRAFFIC HAS LONGER GREEN** whenever the timing of the traffic lights is not the same for drivers in opposing directions.

The **DIVIDED HIGHWAY SIGNS** advise the driver of an upcoming intersection where the roadway is divided by a median or a separation.





#### **HEAVY VEHICLE SIGNS**

Where an extra lane has been provided on an upgrade for slow-moving traffic, signs direct them to the lane.

Due to severe weakening of the road surface, condition of the pavement, or bridges, loads may be limited.

TRUCK ROUTE and HAZARDOUS MATERIAL signs oblige such vehicles to follow the designated roads.

#### 2 - WARNING SIGNS

WARNING SIGNS draw the attention of road users to imminent or upcoming danger or, on occasion, upcoming regulatory signs.

- The background color is yellow (or fluorescent yellow) with black lettering or symbols.
- The diamond shape is the most common and warns of upcoming danger. The pentagon, circle, and rectangle are also used in specific circumstances.

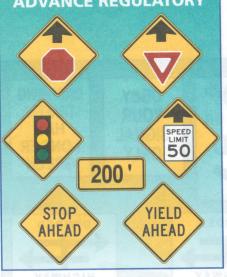
#### SCHOOL SIGNS

3

The yellow (old) or green-yellow fluorescent (new) pentagon with black symbols of school children warns the driver of the beginning of a SCHOOL ZONE or a SCHOOL CROSSING AHEAD. Whether or not special speed limits are present, prudent drivers will slow down and be extra vigilant for the possible presence of children. The addition of crossing lines on the pentagon indicates the location of the SCHOOL CROSSING. The possible presence of crossing guards or school patrols will help control the traffic.



# ADVANCE REGULATORY



# ADVANCE REGULATORY SIGNS

The STOP AHEAD, YIELD AHEAD, SIGNAL AHEAD and **REDUCED SPEED AHEAD** warning signs (whether using the symbols or the word messages) are intended for use on the approach to a regulatory sign.

They are posted when the regulatory signs are not clearly visible for a sufficient distance to permit drivers to bring their vehicles to a stop or adjust speed in time under normal driving conditions. The problem may be a curve in the roadway or an overpass that obstructs the approaching driver's view.

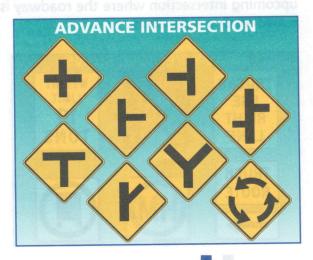
A TAB (e.g. 200') indicating the distance to the regulatory sign may be installed below the warning sign.

Drivers should reduce speed and be prepared to stop or yield.

### ADVANCE INTERSECTION SIGNS

ADVANCE INTERSECTION SIGNS indicate the presence of obscured junctions ahead. The symbol represents the situation graphically, and the relative widths of the lines demonstrate the importance of the intersecting roads. These signs are not usually posted where junction or directional signing is already present.

Drivers should verify the situation ahead, be prepared for unexpected entries into the roadway, and remember that passing maneuvers are illegal when approaching intersections. Old of applied the applied



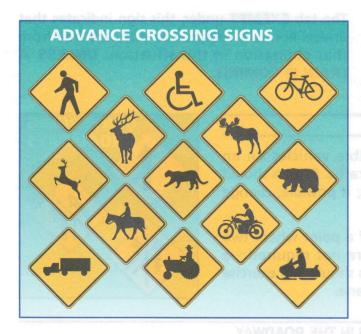
## **ADVANCE TURN OR CURVE SIGNS**

These warning signs, posted before turns and curves, are primarily for the benefit of drivers unfamiliar with the road. They do, however, by their symbol, inform all drivers what to expect.

The **ADVISORY SPEED PLATE** may accompany a curve sign and recommend the maximum safe speed in ideal conditions.

The **CHEVRON ALIGNMENT** may replace delineators on a curve.

The LARGE ARROW (on a yellow rectangle) when posted in a curve warns of an especially dangerous point in the curve.



#### LANE REDUCTION SIGNS

**LANE REDUCTION** signs warn drivers of the loss of one or more traffic lanes on a multi-lane roadway. Drivers should safely enter the continuing lane as soon as possible, and/or facilitate the lane change maneuver for other drivers.

The **NARROW BRIDGE** sign warns the driver to adjust his speed so that he will reach the bridge before or after the oncoming traffic.

## **ADVANCE TURN OR CURVE SIGNS**



#### **ADVANCE CROSSING SIGNS**

**ADVANCE CROSSING SIGNS** alert drivers to unexpected entries into the roadway. The type of possible entry is symbolized on the sign.

If such crossings occur at a particular location, a tab or auxiliary distance sign may supplement these signs to indicate the distance to the exact location.

At the particular location a **CROSSING SIGN** may be posted. (The addition of crossing lines to the same sign).

Drivers should reduce their speed in order to be able to stop if necessary.



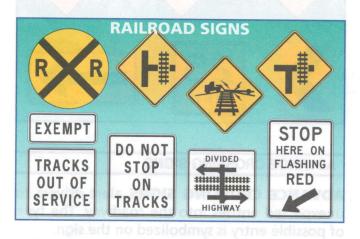
# DIVIDED HIGHWAY SIGNS

**DIVIDED HIGHWAY ENDS** warns the driver that the highway ahead will no longer be divided by a physical barrier.

**DIVIDED HIGHWAY AHEAD** is posted on the approaches to a section of roadway where the traffic will be separated by a physical barrier.

The **TWO-WAY TRAFFIC** sign supplements the message (divided highway ends) and may be posted at intervals to remind drivers that they are no longer on a divided highway.





# RAILROAD SIGNS

The round, yellow sign, with a black X and two R's, is a warning of a **RAILROAD CROSSING AHEAD**. Slow down, be prepared to stop, and check both ways carefully.

The tab **EXEMPT** under, this sign indicates that drivers normally required to stop, are free from that obligation in this situation, **UNLESS A TRAIN IS COMING**.

# **CONVERGING ROADWAYS**

The **MERGE SIGN** warns motorists that possible vehicles on an entrance ahead will attempt to join the flow of traffic. Drivers should be prepared to facilitate the merging maneuvers; if possible, change lanes to the left.

The **ADDED LANE SIGN** is posted in advance of a point where two roadways converge and merging maneuvers are not required - a parallel lane exists for the entering traffic. Drivers should still exercise caution as some vehicles might try to enter their lane.





#### **OBSTACLES IN THE ROADWAY**

Signs posted on obstacles within or at the side of the road to warn and to direct drivers. The **DOUBLE ARROW** indicates traffic may pass on either side of the obstacle.

The **HAZARD MARKERS** channel traffic to the lower end of the stripes: to the right or to the left.

# WARNING - NO PASSING ZONE - SIGN

3.8

The yellow pennant posted on the left side of the roadway indicates the beginning of the **NO-PASSING ZONE**. The high visibility of this sign in passing maneuvers warns drivers from an adequate distance of the no-passing zone.



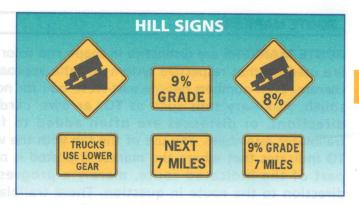


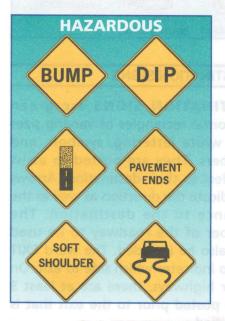
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#### HILL SIGNS

The **HILL** sign is posted in advance of a downgrade that requires some special precautions. Supplemental plaques with respect to the grade and the length may be installed.

Drivers should check their brakes by applying the brake pedal and also prepare to downshift to an appropriate gear to take advantage of engine compression on the slope.





**HAZARDOUS ROAD SIGNS** 

**BUMP** or **DIP** signs warn of a sharp rise or depression that creates discomfort for passengers or may deflect a vehicle from its true course. Drivers should reduce speed to minimize any possible effect on their vehicle.

**PAVEMENT ENDS** warns of a change in the road surface ahead. Drivers should slow down prior to the change as traction will decrease and there could be potholes at the end of the pavement.

The **SOFT SHOULDER** advises that the shoulder cannot safely support the weight of a vehicle. Drivers should avoid using the shoulder and proceed to a paved area if they must leave the road.

The **SLIPPERY WHEN WET** sign warns of a section of roadway where traction is severely reduced when wet. Drivers should reduce speed when wet.



WARNING SIGNS ALERT YOU TO SITUATIONS ON OR NEAR THE ROADWAY AHEAD.

- You should reduce your speed and proceed cautiously.
- You should increase your visual search pattern to locate the hazards.
- You should manage your speed, time, and space to reduce the level of danger (RISK).

# 3 - GUIDE SIGNS

**GUIDE SIGNS** are essential to direct drivers along roadways; to inform them of interesting routes; to guide them to cities, towns or villages; to identify nearby rivers, streams, parks, or historical sites; and to inform them of available roadside services. These signs are usually square or rectangular and color-coded as to their purpose.

#### **INTERSTATE ROUTE MARKERS**

INTERSTATE MARKERS identify and mark all numbered interstate highways. Even numbers denote east-west; odd for north-south highways.

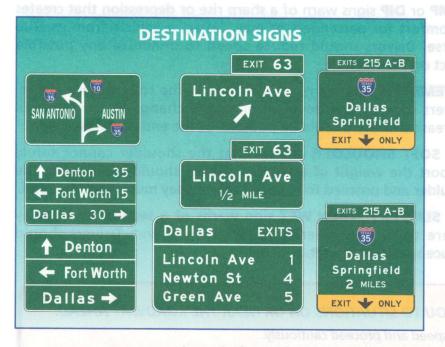




#### **ROUTE MARKERS**

**ROUTE MARKERS** are distinctive in shape and color and are used on that respective system and the approaches thereto. Even numbers denote east-west; odd for northsouth. Auxiliary tabs such as **TO**, arrows, cardinal directions, or distances are often added to form trailblazer assemblies. The use of the tab with the word TO indicates that where the marker is posted is not a part of the indicated route, merely a progressive direction to the route in question. These trailblazers inform road users and guide them to the nearest access point of the designated facility.





#### **DESTINATION SIGNS**

**DESTINATION SIGNS** are green horizontal rectangles of varying sizes with white lettering, symbols, and numbers. They are posted to assist travelers to their destination. Arrows to indicate the direction as well as the distance to the destination. The number of the roadway to be used may also be included. The word **EXIT** at top indicates which side to exit. On major highways, there are at least 3 signs posted prior to the exit that is identified.

Drivers should have plenty of time to prepare to exit.

#### **RECREATION SIGNS**

A brown background (square, rectangle or trapezoid in shape) with white lettering or symbols is reserved for **RECREATIONAL** and **CULTURAL INTEREST** signs.

They may be posted on any **conventional roadway** or **expressway** to direct motorists to facilities; to identify recreational areas and services; and to inform of cultural interest structures and places.

The concept is to guide motorists to a general area and then to specific amenities within the area without confusing these signs with other traffic control signs.



3

#### ROADSIDE SERVICES

On conventional highways, services are generally within sight and available to the traveler at reasonably frequent intervals along the route. The blue square or rectangular **SERVICE** signs are not posted on these roadways.

When such services are infrequent and are found on intersecting highways and at crossroads, these signs will be posted to advise travelers as to the location, distance, and direction.

The service legends may be either symbols or word messages - they should not be mixed.



pertinent information with respect to signs and laws for the country where you intend to travel INTERNATIONAL signs convey their message with symbols, colors, numbers, and shapes rather than words.

#### SPEED LIMIT SIGNS

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# 4 - CONSTRUCTION / WORK ZONE SIGNS & drive about a do shall a based

Signs with an orange background and black symbols or lettering are used when traffic must be moved through or around road construction work, maintenance operations, utility work, and special sporting events on or adjacent to the roadway. These signs (both construction and temporary signs) have to control a wide variety of situations and conditions and as such they present a wide assortment of messages.

#### SPEED

A **FLAGPERSON AHEAD** may slow or stop the traffic (see 2-E Traffic Control Persons) as the situation requires. The driver is well advised to reduce speed to the **SUGGESTED SPEED**, the **POSTED SPEED LIMIT**, or to a speed in keeping with the abnormal driving conditions.





#### WORK ZONE LIMITS

These signs indicate the **DISTANCE TO THE WORK SITE**, the **LENGTH OF THE WORK AREA** and the **END OF THE ZONE**.

A **DETOUR** sign indicates that traffic must deviate around the work in progress up ahead. Square detour signs are posted to delineate the route to be followed.



#### **CONDITIONS IN THE WORK ZONE**

These signs inform of the type of activity in the area, the conditions, changes in the number or position of lanes, etc.

A reduced speed and increased visual scanning will permit the driver to adapt. This will produce extra time to judge, decide and react to these conditions.

#### CONDITIONS IN THE WORK ZONE





3

# **International Signs**

When such services are infrequent and are found on intersecting highways and at crossroads, these signs will be posted to advise travelers as to the location, distance, and direction.

A smore people travel internationally, the need to recognize international signs increases every year. Local auto clubs should be consulted prior to road excursions in foreign lands; they can supply pertinent information with respect to signs and laws for the country where you intend to travel. INTERNATIONAL signs convey their message with symbols, colors, numbers, and shapes rather than words.

#### **SPEED LIMIT SIGNS**

White numbers on a blue circle indicate the minimum speed. Black on a white circle with a red border indicate maximum speed. In some cases, the words maximum replace the words speed limit. Remember the speed limit is posted in kilometers per hour (Km/H).





#### **REGULATORY SIGNS**

**PROHIBITION SIGNS** - a white circular sign with a red border and slash means NO. The black symbol indicates what is prohibited.

**OBLIGATION SIGNS** - white squares with green circles and black symbols oblige all of the traffic to proceed in the indicated direction.

#### WARNING AND GUIDE SIGNS

**WARNING SIGNS**- white triangles with red borders warn of hazards. The black symbol illustrates the upcoming danger.

hese signs indicate the DISTANCE TO THE WORK

detour signs are posted to delineate the route to

**GUIDE SIGNS**- white squares on blue rectangular backgrounds provide information about services that are adjacent to the roadway. The symbols indicate the services. UNSPECIFIED DANGER FALLEN ROCK FALLEN ROCK INTERSECTION INTERSECTION



**Pavement Markings** 

**PAVEMENT MARKINGS**. Sometimes special markings may also be painted on curbs and other surfaces. They are normally white or yellow in color and are used to assist in regulating the flow of traffic. These markings define lanes, delineate roadways, reinforce information given by signs or signals, and sometimes warn of possible dangers.

The most common pavement markings are lines. They are painted in two colors: **yellow lines** that separate traffic traveling in opposite directions and **white lines** that separate lanes of traffic traveling in the same direction (the thicker the line, the more hazardous the situation).

#### **YELLOW LINES**

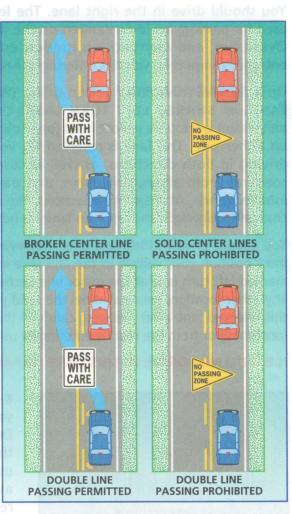
A **CENTER LINE**, yellow in color, need not be at the geometric center of the roadway. It may be a single **BROKEN LINE** which permits passing if the way is clear; or a solid yellow line which prohibits passing (except in special cases: slow-moving vehicles, bicycles, etc.).

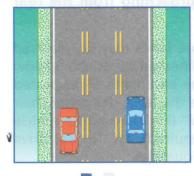
**EXCEPTIONS** : A driver may cross a single or double solid line if the maneuver can be performed safely, when the lane is blocked or closed to traffic; to pass farm machinery, a tractor, or an animal drawn vehicle; to pass a bicycle; or to pass a slow-moving vehicle (sign on rear of the vehicle).

Center lines composed of double lines with one broken line and one solid line permit passing for drivers travelling beside the broken line and prohibit passing for drivers beside the solid line.

While driving on a two-lane roadway, you are required to use the right lane. You may use the left lane to pass another vehicle or in the event that your lane is obstructed or closed to traffic.

Before entering the left lane, you must yield the rightof-way to any oncoming traffic. The complete procedures for passing maneuvers will be discussed later in Chapter 15.





#### **ALTERNATING TRAFFIC LANE**

A **DOUBLE BROKEN YELLOW LINE** on either side of a lane indicates the lane is designed to carry traffic in one direction at certain times, and in the opposite direction at other times (in urban areas as well as on bridges - as shown).

Before entering the lane, check for signs at the side of the road or special lane-use lights (see Page 3.18) installed above the lane to determine if you are permitted to access the lane at the present time.



3

# SAFETY TIPS

If you ever notice that a yellow line is on your right, you are traveling the wrong way. Immediately move onto the shoulder and when it can be done safely, and turnabout. Many highways use raised lane markers (reflectors attached to the pavement or Pott's Dots) to guide motorists. They should appear white or yellow depending on the line they represent. Should they appear red in color, you are traveling in the wrong direction.

On **4-LANE ROADWAYS**, a double yellow median line or divider (median strip) should not be crossed in either direction. On divided roads, a solid yellow line borders the median divider on both sides.

You should drive in the right lane. The left lane should be used for passing, avoiding dangers on the shoulder (e.g. Move Over Law), and approaching hidden entrance ramps or entrance ramps with vehicles entering the roadway.

On a **5-LANE ROADWAY** (often called **TWO-WAY LEFT TURN LANES** or **SHARED LEFT TURN LANE**) the center lane is delineated by double yellow lines (one solid and one broken) on either side. This lane is reserved for vehicles turning left driving in both directions, as well as turning left into the roadway from alleys, driveways, and parking lots (*not at intersections*). At major intersections, the lane markings will change to highlight the left turn lanes in both directions.

You should drive in the right lane; however, to turn left, you must position your vehicle in the 2nd lane in time to enter the marked left turn lane at the major intersection. For left turns at any other location, you may cross the solid yellow line to enter this reserved lane after checking carefully that no other vehicle (oncoming or from the rear) is entering or using the lane.



#### N.B. : DO NOT DRIVE IN THIS LANE (for more than 300')!



3.14

**6-LANE ROADWAYS** - The center line may be a doubleyellow, though usually a median strip or concrete divider. Drive in the right lane in order to exit or to drive at less than the posted speed limit. The second lane should be used when driving at the speed limit as well as to pass or avoid dangers from the right. The left lane should be reserved for passing. Check for reserved lanes, left exits and vehicles at high speed approaching from the rear before entering the left lane.

**RESERVED LANES** - One or more lanes may be reserved for special vehicles. They are delineated by double yellow lines and a white diamond on the pavement. Signs posted at the side of the road, or above the lane, designate their use for "**Bus**," "**Bicycle**," or "**HOV**" (high occupancy vehicle and the number of occupants required), etc. Do not drive in these lanes unless your vehicle gualifies.



# WHITE LINES ON THE PAVEMENT

WHITE LINES separate traffic moving in the same direction. They channel traffic into orderly lanes and assist drivers to control their path of travel. Lines are also used as:

# EDGE LINES:

- mark the right edge of the roadway
- on one-way streets, the left edge line should be painted yellow but is often white in color.

### **CROSSWALKS:**

 at intersections, wide perpendicular or horizontal lines mark walkways to guide pedestrians and warn



drivers. Elsewhere, the crosswalks are yellow.

#### **STOP LINES:**

 wide lines that mark where vehicles must stop at red traffic signal lights and stop signs. These lines will be painted from one curb to the other (all the way across) on one-way streets.

### **OBSTRUCTION** MARKINGS:

- guide traffic around fixed obstructions
- slanted (zebra) stripes indicate where you should not pass.

#### PARKING SPACES:

- controlled by white lines on the pavement. They encourage an orderly and efficient
- use of space while
- preventing
- encroachment on bus

stop zones, fire hydrant zones, etc.

#### **CURB MARKINGS:**

white, yellow, blue, green and red may be used to control parking. slidw barabianoo ad



WHITE LETTERING or SYMBOLS painted on the pavement may supplement signs posted overhead or at the side of the roadway. They may designate lanes, warn of hazards, provide information, etc. Some examples are:

## LANE DESIGNATION:

- arrows indicate the direction drivers in a
- given lane must travel. May be accompanied
- by signs overhead or at
- the side of the road. the word ONLY
- indicates one direction of travel is permitted.

#### **RAILROAD CROSSINGS:**

are delineated by a white crossbuck and double R.

#### SCHOOL ZONES:

- indicated by the word SCHOOL .
- SCHOOL X-ing indicates where students cross.

# WARNINGS:

 stops and signal lights may be lettered on the pavement.

#### **INFORMATION:**

 speed limits, route numbers, etc. may be painted on the roadway.

#### **RESERVED PARKING:**

 handicapped symbol reserves the space for the disabled (identified by the color blue).

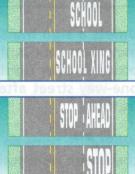
#### **RESERVED LANES:**

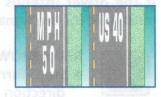
- white diamonds
- painted on the lane
- identify reserved lanes
- (HOV lanes).



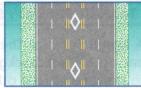






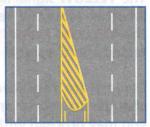


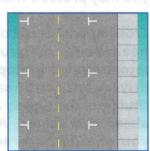














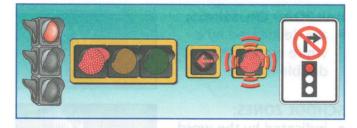


Traffic Signals

Traffic control signals are valuable devices for the regulation and orderly movement of vehicular and pedestrian traffic. They control traffic at one location and are clearly visible, mounted on posts at the corners of intersections or hung over the roadway. The position and colors of the signals are standardized. When lights are inoperative, drivers should stop (proceed as if it were a four-way stop intersection).

### **RED SIGNAL LIGHT**

The **RED** signal light is located at the top when mounted vertically or on the left when horizontal. If the **RED LENS IS LIT**, drivers must stop their vehicles at the indicated stop line; if none is marked, before reaching the crosswalk on the near side of the intersection.



Unless a sign indicates otherwise, the driver may then cautiously enter the intersection in order to turn right. (Also to turn left onto a one-way street after stopping and yielding to traffic.)

WARNING: turns on red lights are not universal; check with local authorities.

If the driver intends to proceed straight, he must wait for the signal to change to continue.



RED ARROW:

• Stop. Turns prohibited in the direction of the arrow.



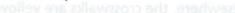
**3.16** 

FLASHING RED LIGHT:
Stop, then proceed only when it is safe to do so (similar to a stop sign).

by the color blue).

**TRANSIT PRIORITY SIGNAL** 

A signal light (at the top) with a white vertical bar on a black background allows transit buses to proceed before other traffic. Only buses (and taxis in a reserved lane, where so indicated) may proceed when the **TRANSIT PRIORITY SIGNAL** is shown, while other vehicles must remain stopped. (This signal is accompanied by a steady red light as illustrated - for the few seconds that it is lit.)





#### YELLOW (AMBER) SIGNAL LIGHT

The **YELLOW** signal light is located in the middle whether mounted vertically or horizontally. If the **YELLOW LENS IS LIT**, the green signal has ended and the signal is about to change to red.

Drivers are required to stop. However, if it changes to yellow and you cannot stop safely, you may proceed with caution.

Crossing an intersection on a yellow signal is a hazardous maneuver! You are highly recommended to stop. In order to do this, good drivers are continually aware of the traffic situation, the signals ahead and the traffic both ahead and behind. Approaching intersections, you should "cover the brake," and be prepared to stop.

How long has the signal been green? Will the traffic behind be able to stop? How much space will you need to stop? These questions should be considered while nearing any green signal.



The basic concept is, when a signal light changes to yellow, you should stop!



#### **YELLOW ARROW:**

• If you were intending to turn, you should stop.

FLASHING YELLOW ARROW:



 Slow down, yield to any road users in the intersection and any oncoming traffic. Turn when it is safe to do so.



#### FLASHING YELLOW:

Cover the brake, proceed with caution, check left and right before entering the intersection.



#### **GREEN SIGNAL LIGHT**

The **GREEN** signal light is at the bottom when mounted vertically and on the right when horizontal. When the **GREEN LENS IS LIT**, the driver is authorized to proceed into the intersection. *This does not guarantee that the way is clear.* 

When a red light changes to green (**fresh green**), you should yield to any other vehicles or pedestrians that have not cleared the intersection. There is also a possibility of late arrivals who tried to "**run the yellow**." Check the traffic to the left, center, right and left again before entering (count of three technique). Do not enter if other road users do not appear to be stopping or are still engaged.

# SAFETY TIPS-

When approaching a green signal light, is it a "**stale green**?" (It has been green for some time, since you first noticed it. It might be ready to change to yellow any second.) "**Cover the brake**" and check traffic to the rear, be prepared to stop safely prior to entering intersection.

If the light is still green when you pass the "**point of no return**" (the last chance to stop safely prior to entering the intersection), check the cross traffic and then proceed to cross the intersection while returning to your normal cruising speed.

#### **GREEN ARROW:**



- You may turn in the direction of the arrow after checking and yielding to pedestrians (any road users in intersection).
- This light may accompany a red signal. You may move in the direction of the arrow (oncoming vehicles may also be turning left).
- This is called a protected left turn.
- You may still turn left when the light changes to a green traffic signal, as illustrated (no red leftturn arrow visible), but only after yielding to oncoming traffic, pedestrians and any other road users in the intersection (no longer a protected left turn).

#### PEDESTRIAN SIGNALS

**PEDESTRIAN SIGNALS** are used at intersections or crossings for the exclusive purpose of controlling pedestrian traffic.





In major cities, a device called an "OPTICON" may be installed at signal light controlled intersections. The device resembles a camera with a white lens. It receives a signal from approaching emergency vehicles and assigns right-of-way to them (pre-emptive control of traffic signal operation). It flashes to indicate an emergency vehicle is traveling on this road, or a steady white when an emergency vehicle is crossing the intersection.

The concept is to regulate the flow of traffic in order to allow pedestrians time to cross while minimizing the possibility of conflicts.

Pedestrians are still required to check traffic with due care before crossing and to avoid causing untoward delays for traffic.

Drivers must yield to pedestrians and pay special attention to those who are visually (white cane/guide dog) or hearing impaired.



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• The illuminated WALK or a walking person symbol indicates pedestrians may enter the crosswalk.



When flashing, hurry to safety. Some signals indicate time remaining.



The illuminated **DON'T WALK** or orange hand symbol prohibits entering the crosswalk.

When flashing, hurry to safety.

In some areas, an audio signal assists the visually impaired. It makes a continuous sound to cross; an intermittent sound when the lights flash; and no sound at all when they should not cross the intersection.



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Numeric countdown lights may be installed to assist pedestrians and warn of the time left to cross.



#### LANE-USE SIGNALS

Special overhead signals control the use of lanes on bridges, in tunnels, reversible lanes, etc. They inform road users of the availability of the lanes ahead.



A STEADY RED X identifies the lane below the signal as a lane that you may not use.



A STEADY DOWNWARD GREEN ARROW, indicates you are permitted to drive in the lane under this signal.



A STEADY YELLOW X means you should prepare to vacate the lane under the signal in a safe manner.

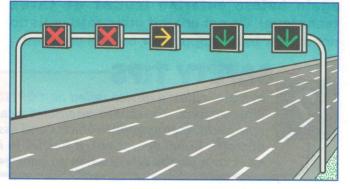


A FLASHING YELLOW X identifies a lane reserved for left turns in both directions.



A FLASHING HORIZONTAL YELLOW OR GREEN ARROW indicates the direction in which you should direct your vehicle to change lanes in complete safety.

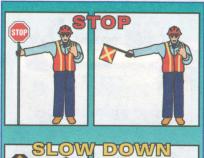
intersection. There is also a possibility of lat arrivals who tried to "run the yellow." Chec the traffic to the left, center, right and lef





# **Traffic Control Persons** clangi? bnaH

raffic control persons are authorized to direct and control the traffic flow for a specific purpose. Failure to obey them is hazardous, as well as entailing penalties similar to passing a traffic signal. Some examples of traffic control persons are:







- FLAGGERS (FLAG PERSONS): • using a flag or a standard,
  - they control traffic at construction or road work sites, etc.
- using hand
  - signals and/or a whistle, they direct traffic.



3





**CROSSING GUARDS:** using a stop sign symbol, they control traffic to protect students while they are crossing.



# SAFETY TIPS

In any situation where there is a traffic signal or sign, as well as a peace officer or other traffic control person, you must obey the directions given by the person directing the traffic.





and signals must be used to communicate road users intentions on vehicles without electrical turn signals or when the signals may not be operative.

Road users may supplement the mechanical signals with a manual signal. This adds a personal aspect to the communication and can be more effective. Positive results from other road users are much more likely.

You must signal your intentions (by law) with respect to any maneuvers turns or lane changes - by signalling steadily for a sufficient distance (at least 100 feet - at urban driving speeds, otherwise 200 feet, in most cases). Doing so will permit other drivers to react and be able to take appropriate action should it be necessary.



SAFETY TIPS

3.20

COMMUNICATION IS ESSENTIAL TO SHARING THE HTS SAFELY. Hand signals can be used in conjunction with the electric turn signals. They often result in a more positive response from other road users. Other hand signals can be used too. For example, a gesture to proceed at a four-way stop intersection might be appropriate.



3-F