## **Highway Types**

There are 4 basic types of highways across the United States. They are:









WI State

U.S. (United States)

WI County Highways – use a standard square shape sign with the county highways being designated by the use of letters. There can be 1, 2, or 3 letters on a WI county highway sign. County highways stay within the county that highway is in and have a 55 mph maximum speed limit. WI county highways are maintained by each county that highway is in.

WI State Highways – stay within the state of WI and are maintained by the county that the state highway is in. State highways are designated by the use of white and black signs with the use of numbers. WI state highways are permitted to have a maximum speed limit of 65 mph. Speed limits will vary on these highways.

U.S. Highways – travel from state to state and are maintained by each state the highway goes through. U.S. highways are designated by white and black badge symbol with numbers and 65 mph max. speed limit in WI.

Interstate Highways – travel from state to state like U.S. highways. Interstate highways are designated by red, white, and blue shield symbol with numbers. The National System of Interstate and Defense Highways were created in 1956. Interstate highways in WI have a maximum speed limit of 65 mph.

What is the difference between a freeway and an expressway? Freeways are major highways that travel through rural areas. Interchanges may be miles apart on freeways. Expressways are major highways that travel through major cities. Expressways are quick, or express, ways to get from one area of the city to another area of the city. Expressways will have interchanges that are close together.

## **National Highway Numbering System**

The number of most State, U.S., and Interstate highways tells you something about the direction the highway travels.



Even numbered highways start in the west and travel east in direction.



Odd numbered highways start in the south and travel north in direction.



Odd first digits are spurs off the main highway and connect with another highway or ends.



Even first digits are loops or a bypass that branch off that highway and reconnect with the same highway it branched off of.

Not all state highways will follow this numbering system. Because WI was the first state to number highways, WI highway numbers do not always follow the numbering system. It is best to always plan your routes using a map. If you are traveling from state to state, check with each state for major roadwork areas. Visit Wisconsin 511 Travel info., or dial 511, for the most current road closures/travel information for Wisconsin highways.

Which direction do the following highways travel? Do they travel South & North (S/N) or West & East (W/E)?

2
12
14

S/N	W/E
S/N	W/E
S/N	W/E



S/N	W/E
S/N	W/E
S/N	W/E



5/ IV	VV/E
S/N	W/E
S/N	W/E

# **Highway Interchanges**

Highway Interchanges are where you can enter, exit, or change highways. As a driver you need to know how to use each type of interchange. Planning ahead and knowing where you need to enter or exit makes your travel easier.

There are 4 basic types of highway interchanges.



**Diamond Interchange** – is the most common type of highway interchange in use. Diamond Interchanges allow traffic to exit the highway system to enter non-highway roadways. Diamond Interchanges will normally have some type of traffic control, such as stop signs, traffic lights, or roundabouts.



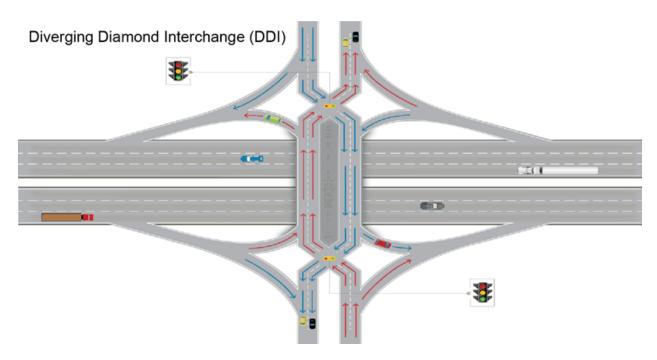
Cloverleaf Interchange – A cloverleaf interchange is a two level interchange. To go left, vehicles first continue as one road passes over or under the other, then exit right onto a one-way 270 degree loop ramp and merge onto the intersecting road. One problem with cloverleaf interchanges is the weaving that must occur between the left-turn movements ramp. The basic problem is that two types of traffic are switching lanes in the middle of the interchange: traffic that has just entered from the right from the first loop and traffic that is about to exit to use the second ramp. Both of these streams of traffic must switch places between the right lane of the through highway and the auxiliary entrance/exit lane



Directional Interchange – is where one highway system meets another. They will be multiple exits and entrance ramps. When using the Directional Interchange you need to know which direction you need to go and take that exit. Directional Interchanges allow for traffic to change highway systems without having to stop.

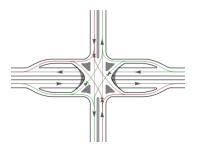


**Trumpet Interchange** – is where one highway system ends and joins with another highway system. Trumpet Interchanges will normally have sharp curved exit and entrance ramps. Trumpet Interchanges allow for traffic to change highway systems without having to stop.



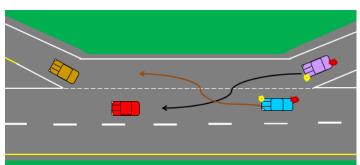
**Diverging Diamond Interchange** is the newest type of interchange on our highways. Currently the states of: Missouri, New York, Ohio, Utah, Nevada, Virginia, Tennessee, Kentucky, Minnesota, Colorado, Idaho, Georgia, Kansas, Maryland, and Wyoming have active Diverging Diamond Interchanges. WI will soon have one.

As you can see from the diagram, traffic will switch sides for a short time. Diverging Diamond Interchanges require less traffic signals making the movement of traffic smoother and safer.



**Single-point diamond interchange (SPDI)**, is a type of diamond interchange. The design was created in order to help move large volumes of traffic through limited amounts of space safely and efficiently.

Several states are currently using this type of diamond interchange.

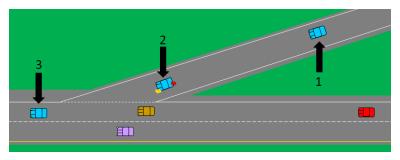


Weave Lanes – are lanes that go from an entrance ramp to an exit ramp. Weave lanes make it safer for vehicles to enter and exit the highway. As the diagram shows, cars enter the highway using the weave lane and then lane change (weave) over to enter highway traffic.

If you stay in the weave lane, it will exit you off the highway. Cars on the highway will have to lane change (weave) over into the weave lane to exit the highway. Vehicles entering the highway are required to yield to vehicles exiting the highway.

### **Entering Highway**

**Step 1** - Make sure you have plenty of space to enter. Check traffic on the highway by looking in the side view mirror and over your shoulder to see how fast they are going and if you have room to enter without interfering with other traffic.

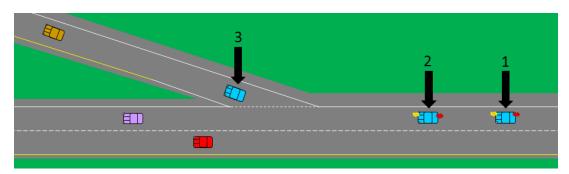


If there is room to enter, use the entrance ramp to build speed to match that of traffic on the highway.

Step 2 – Use your signal to let other vehicles on the highway know that you are there and attempting to enter the highway. If you do not have room to enter, slow down until you do. Remember that vehicles entering the highway must yield to vehicle on the highway. Vehicles do not have to move over or slow down to let you on. If you are driving on the highway and see a vehicle attempting to enter, move over or slow down to make room for them to enter if it is safe.

**Step 3** – Once on the highway make sure to turn off your turn signal and adjust your speed and spacing to make that of other vehicles on the highway if conditions are safe. Remember to leave 4 seconds between vehicles.

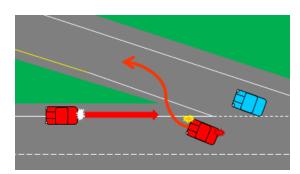
#### **Exiting Highway**



**Step 1** – as you approach your exit, make sure to signal and check traffic behind you.

**Step 2** - assess the amount of traffic and space on the exit ramp. Do not slow down on the highway if there is room to slow down on the exit ramp. Vehicles behind you will not be expecting you to slow on the highway.

Step 3 - when on the exit ramp, slow to a safe speed. Remember to turn off your turn signal.

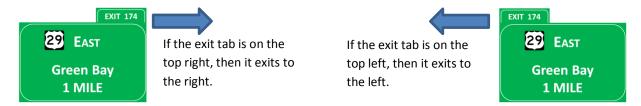


If you miss your exit, keep going and take the next exit to turn around and return to the exit you missed. Attempting to sneak onto the exit ramp can cause a crash. Crossing solid white lines is illegal and could result in a ticket. Other vehicles will not be expecting you to exit.

**NEVER** back up on the highway shoulder.

## **Understanding Highways**

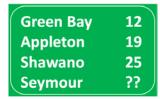
Traveling the highway systems can be easy if you understand the meaning and purpose of all the signs and markings.



The exit tabs on top of the Exit signs indicate which side of the highway the exit is located on. Not all exits are on the right side.



If there is a yellow EXIT ONLY sign under the exit sign it indicates that the lane this sign is above will exit the highway. If you want to exit the highway, stay in this lane. If you do not want to exit, then you must lane change to a different lane.



Location signs tell you how far from certain destinations you are. The top listing will be the closest, with the bottom listing being the farthest from you. The numbers on the signs indicate the approximate number of miles from the location you are.



Standard Mile Markers tell you how far on that highway system you are from the beginning of that highway in that state. The number will increase as you go North or East, and decrease as you go South or West in direction. Mile markers will also correspond with exit numbers. If you are at mile 174 and you are looking for exit 170, you need to travel 4 miles to get to the exit.



**Median Reference Markers** give you more detailed information about where you are to help motorist or emergency services find you easier. They are normally found in the center media of the highway. The information on the sign tells you your direction of travel, which highway you are on, and which mile on that highway you are at.

N = You are northbound 41 = on Highway 41 201 = you are at mile 201.3



Fastest you can go is 55 MPH. Slowest you can go is 30 MPH during good conditions.



You must drive in the right lane if going slower than other traffic.



Watch for slower moving trucks driving in the right lane.

#### **HIGHWAY SYSTEM DRIVING**



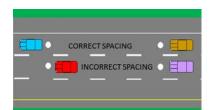
Single white reflectors are placed alongside the highway to show where the right edge of the highway is at night and during bad weather.



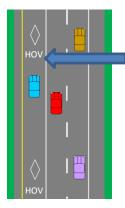
Double white reflectors outline the right edge of an exit or entrance ramp.



Single yellow reflectors show you where the left edge of the highway is.

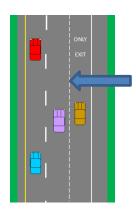


Some highways will have white dots in the center of your lane. These dots help you keep the proper space between vehicles driving in the same lane. If you cannot see two dots between you and the vehicle ahead, you are too close. Slow down and leave more space. Always try to keep at least 4 seconds between vehicles while driving on highways.

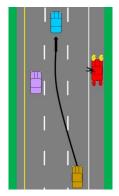


### **HOV (High Occupancy**

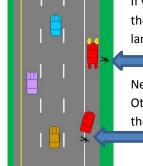
Vehicle) lanes will be marked with a white diamond and the letters HOV by it. Many drivers call this the carpool lane. You must have a designated number of people in your vehicle to use this lane.



Lanes outlined with smaller white lines indicated that the lane is going to either end or exit that highway. If you are in that lane and want to stay on the highway, you will need to lane change.



If there is a vehicle stopped on the shoulder of the highway, slow down, and move to a lane away from that vehicle. Give the vehicle as much room as you can.

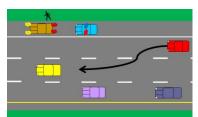


If you have to pull onto the shoulder of the highway, pull as far off the travel lanes as possible and safe.

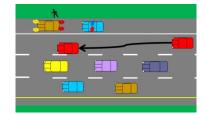
### CORRECT

Never stop or walk in a travel lane. Other vehicles will not expect you there.

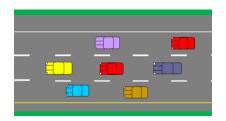
WRONG



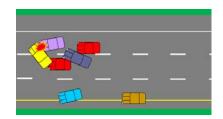
Move to a lane away from any stopped police vehicle with active lights on the shoulder of the highway. If you can't move to the next lane, slow down and move to the left most part of your lane.

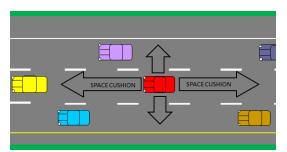


<u>WI LAW</u> – requires vehicles to move over and slow down for stopped emergency, tow, and maintenance vehicles with active warning lights stopped or moving slowly on the shoulder of the highway. If unable to move into next lane, you then must slow down and move to the left most part of your lane if the stopped vehicle is on your right side.



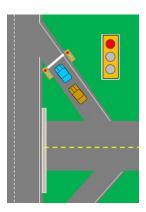
NEVER drive in a "bunch". If one vehicle makes a mistake it could cause the following vehicles to crash into each other.



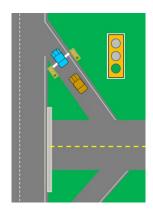


Always try to keep a space cushion around your vehicle when driving on highways. The faster you go, the more space you need. Things happen very quickly on the highway so give yourself plenty of space to deal with problems when they happen.

#### Remember the 4 second rule.

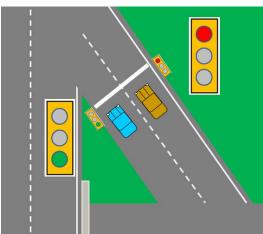


Metered Ramps – have traffic signals that direct when traffic may enter the highway. When the signal is RED, stop by the stop line if you are the first vehicle in line.



When the traffic signal turns GREEN one vehicle can enter the highway. The GREEN will switch back to RED quickly.

A flashing YELLOW signal indicates you may enter the highway with caution.



When there are multiple lanes entering the highway, each lane will have their own traffic signal. You must follow the traffic signal for your lane.

Ramp metering is done by placing sensors in the pavement to trigger the traffic signals to change when there is an opening on the highway.

Even though you have a GREEN traffic signal, you still must yield to traffic on the highway. Use caution when merging with traffic on the highway.

## **Trip Planning**

### **Mapping your Route**

One of the first steps of planning your trip is to map out the route you plan to take. You can do this the old fashion way of looking at the paper map or going hi-tech with your phone GPS/Mapping app or an online service. Plan

your main route and an alternative route in case your main route is not available due to construction or closure from a traffic incident.

When planned path takes you through towns and cities, use an average speed of 50 mph to determine the estimated time it will take you. Remember that when you go through towns and cities, your speed will be lower depending on the roads you travel. You must also figure in stops at traffic lights, stop signs, and rest breaks which should be taken at least every 2 hours.

Prior to heading out on your travels, be sure to let a few very close friends or relatives know where you are going and your planned route. It never hurts to give them a detailed list of your plans in case something happens. Families have gone missing for days because no one knew where they were going or which route they were taking. You may think you will be fine because you have a cell phone in case of problems. Think again. Cell phone batteries die or you may enter a coverage "dead zone". Also plan to check in with them at certain times of your travels. That way they know you got to where you're going.

#### **Vehicle Readiness**

Make sure your vehicle is capable of the travel you plan on taking. If your vehicle has a difficult time making it across town, maybe it should not go on a several hundred mile trip.

What if vehicle problems occur while on the trip? Do you know what to do? Simple problems like a burnt out light bulb or a flat tire are easy to deal with if you prepared. Have a few extra light bulbs and make sure your spare tire is in good shape. If you are going on a trip that is several hundred miles, maybe pick up a full size spare tire if you have the space to pack it. Make sure you also have jumper cables, small tool kit, and extra engine fluids in case you need them. If you plan on staying on well-populated routes, then some of these items may not be needed due to the number of places along the way you could purchase them.

Also have your vehicle ready for the climate and area type you are going to be driving through or in. If your route takes you through the mountains or desert, is your vehicle capable of those areas? Do you need tire chains if driving through the mountains?

#### **Driver and Passenger Readiness**

Driver readiness is a very important part of your travels. Does the driver have experience in driving the number of miles you plan on going? Is the driver well rested and in good physical shape to drive? Is the driver familiar with the vehicle they will be driving? Does the driver have experience in driving though the type of terrain you will encounter? These are all questions the driver needs to ask themselves before starting the trip.

Are there any special needs of your passengers? Does anyone need motion sickness medication? Do you have things to keep your passengers occupied, especially children? If traveling several hundreds of miles, does everyone have the proper clothing for the different areas you will be travelling through?

Whenever traveling, you should always have some basic things. Such as; enough water for all passengers, energy bars or trail mix, first aid kit, extra clothing, blanket, disposable hand warmers, flashlight with extra batteries, hand sanitizer, baby wipes, paper towel, metal can with candle and matches, and any other items you may think will be useful during an emergency.

The most important thing to do when traveling is to have fun and enjoy the travel.