



Disclaimer

The techniques shown here have been compiled from experienced sources believed to be reliable and to represent the best current opinions on driving at Watkins Glen. But they are advisory only. Driving at speed at Watkins Glen, or any other track, requires skill, judgment and experience. These techniques assume the reader has high performance driving knowledge and applies them as applicable to their level of driving experience.

High-performance driving can be very dangerous, carries inherent risks and may result in injury or death. NNJR and PCA make no warranty, guarantee or representations as to the absolute correctness or sufficiency of any representation contained herein. Nor can it be assumed that all acceptable safety measures are contained herein or that other or additional measures may not be required under particular or exceptional conditions or circumstances.

Watkins Glen

As everyone knows, Watkins Glen is a famous track not only due to its history but because it is fast with a lot of elevation change. The speed and the elevation affect how many of the corners are driven. Less obvious is the banking (camber): it affects the line in many corners. In this article, we cover the basics to help drivers new to Watkins Glen plus we include some tips to help advancing drivers stay safe while they drive this challenging—and fun—track.

Some track basics to start. The reference points (RP's) for a corner are typically the Turn-in, Apex and Track Out. (On the maps that follow, they are labeled TI, A and TO). Where possible, we've described these RP's for all of the Watkins Glen corners with something permanent, e.g. a light. Cones will be placed at each of these RP's to make them easy to see but it is always best to find an immovable reference, even if it is a tire mark on the white verge line or on the track. The other consideration is that the same RP doesn't work for every driver. One driver will see a Turn-in cone and turn when the nose of the car is abreast; another driver when they (the driver) are abreast. And some cars turn quicker than others.

As a student driver, your instructor will work with you to find the right RP's. For student drivers, achieving a consistent Turn-in point is the first (critical) step to achieving a consistent line. A consistent speed at the same Turn-in point lap after lap is the mark of an advancing driver.

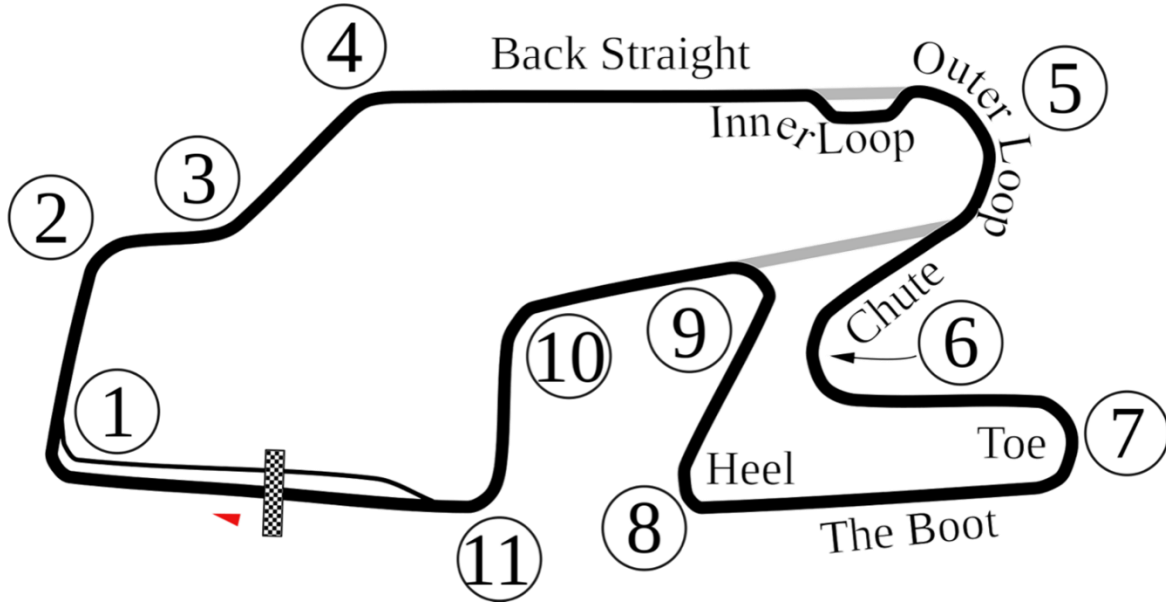
Passing zones are noted in the following description. Unless otherwise noted, passing must be done on the side noted. For example, passing on all three straights (back straight, pit straight and sole of the boot) must be done on the right. This is consistent with DE philosophy that the passing car goes off line and the car giving the pass stays on line.

The following description talks about trail braking, mainly for advancing drivers. As a new driver, just know that you will naturally find yourself trail braking; it simply means braking while turning into a corner.

With all of that said, let's take a lap around Watkins Glen!

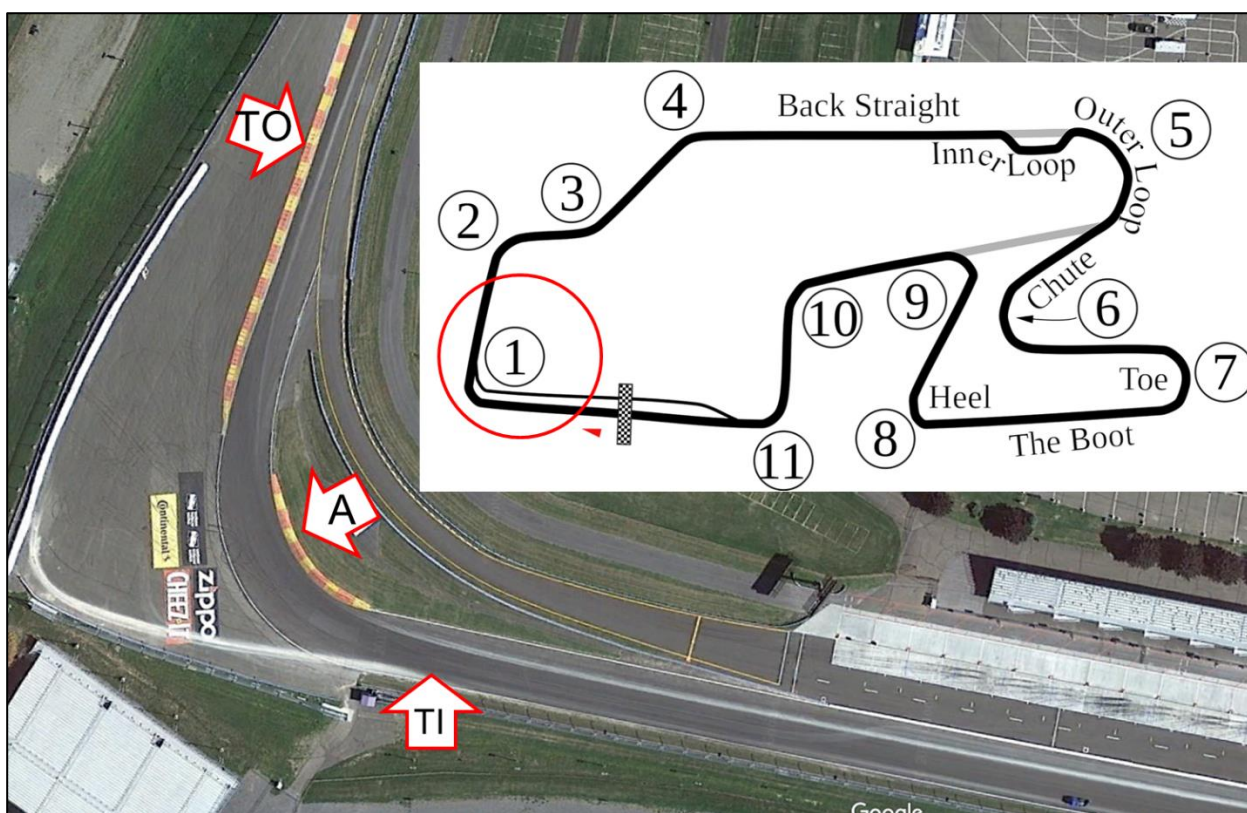


Watkins Glen Track Map



Turn 1

Turn 1 is very important since it leads into the fastest section of the track: the Esses followed by the back straight. Therefore, it is important to get the car turned and set up to accelerate as early as possible. This means most of the braking is done in the braking zone with just a touch of trail brake (a “2” at Turn-in followed by 1, 0). The braking zone is downhill so brake earlier than you think to have to in order to have time to slow the car (the front straight is fast) and to complete your downshift(s) to third gear (in most cars). This is not a corner to brake late since a smooth brake release is essential. The Turn-in point is critical (moreso than most corners) so find a reference point that works for you...2 to 3 car lengths before the flag station on the left, approximately where a “0” brake marker would be, if it existed. As soon as the car turns, the banking and compression (we are going down hill) helps and we should look through the apex to track out. Use the low curb at the apex and run along it for several feet; track out against the exit curbing, long before the end but well past the end of the white wall outside the exit curbing.



A note on curbs. Turn 1 is the only corner on the track where driving on the curb is recommended. In all other cases, we want to drive next to the curbing but not on it.

The chute between Turns 1 and 2 is a passing zone on the right that is easy for both cars. But first make sure no one is exiting the pits. You can safely pass an exiting car since it should stay to the right all the way to the apex of Turn 2 and the driving line is on the left.

The Esses: Turns 2, 3 and 4

Turn 2 is a fast right hander that begins the Esses. It is banked and the car compresses so, for advancing drivers (not novices) lower powered cars don't need to brake or lift and higher-powered cars just need a lift. Beginners often want to brake here: better to lift. The turn-in point is the end of the road/gate at track left. This requires a gradual wind of the wheel since it is earlier than the "school line." We want to exit Turn 2 track right. We don't need (or want) to track out since Turn 3 is a left-hand corner. Fortunately, the compression and the big uphill between 2 and 3 mean the car sticks and doesn't need to track out very far before returning to the right side.

For all drivers, but especially beginners, shift to 4th gear before Turn 2. We don't want to be shifting in the Esses!

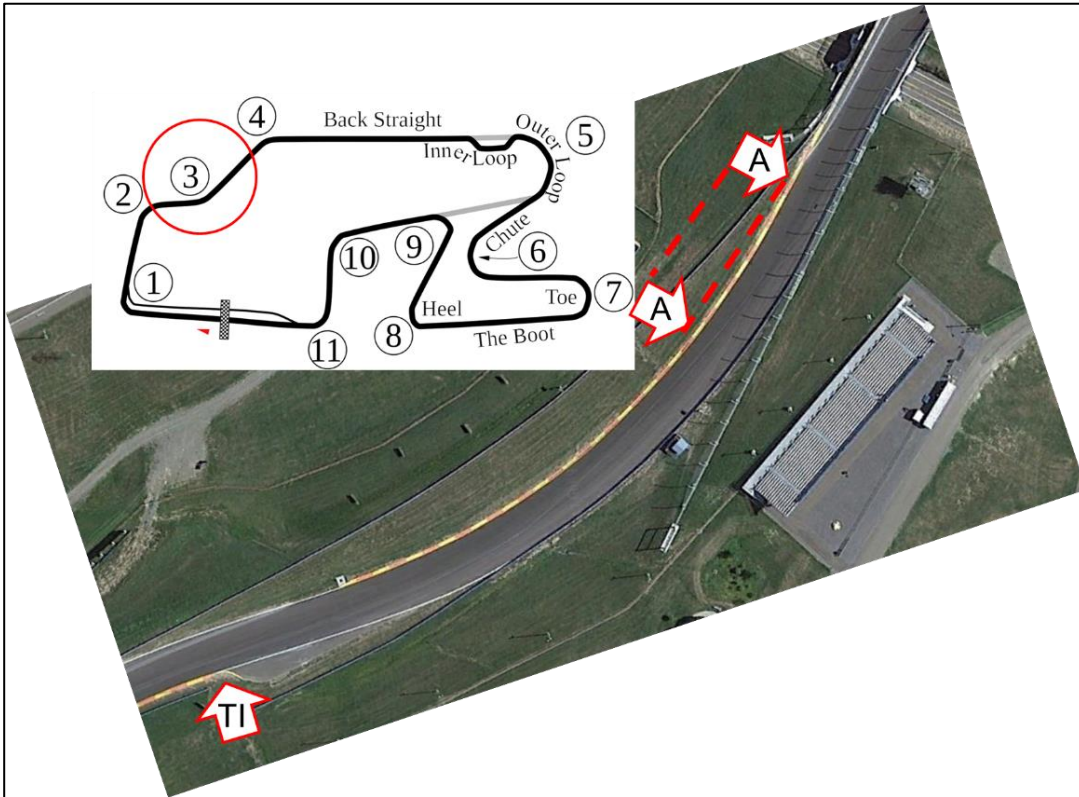
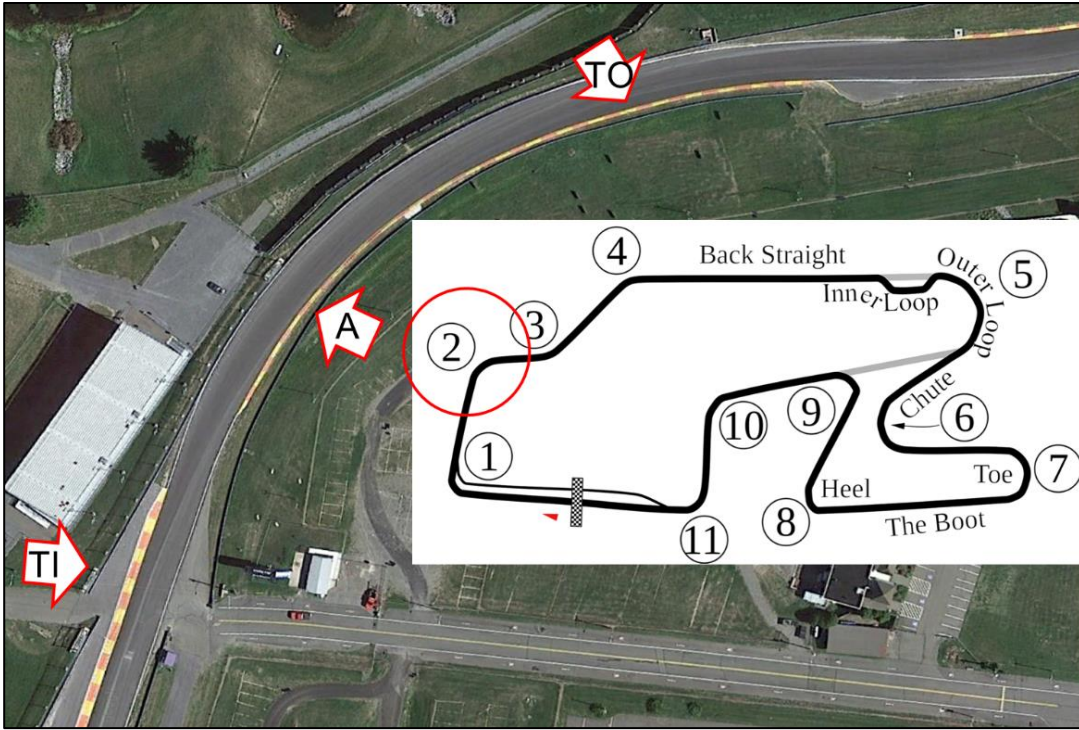
After Turn 2, head up the hill on the right side. Turn 3 requires very gentle, smooth steering input. The reason: the track is crowned and turning in requires going from the right side of the track (banked to the right) to the left side (banked to the left). Going across the crown in the middle of the track at the top of the hill can make the car feel nervous, so be prepared. It is important to be on the power through here: a lift while crossing the crown could be disastrous. Turn-in for T3 is just past the end of the Armco on the right (you can also use the end of the curbing on the right); don't turn before that.

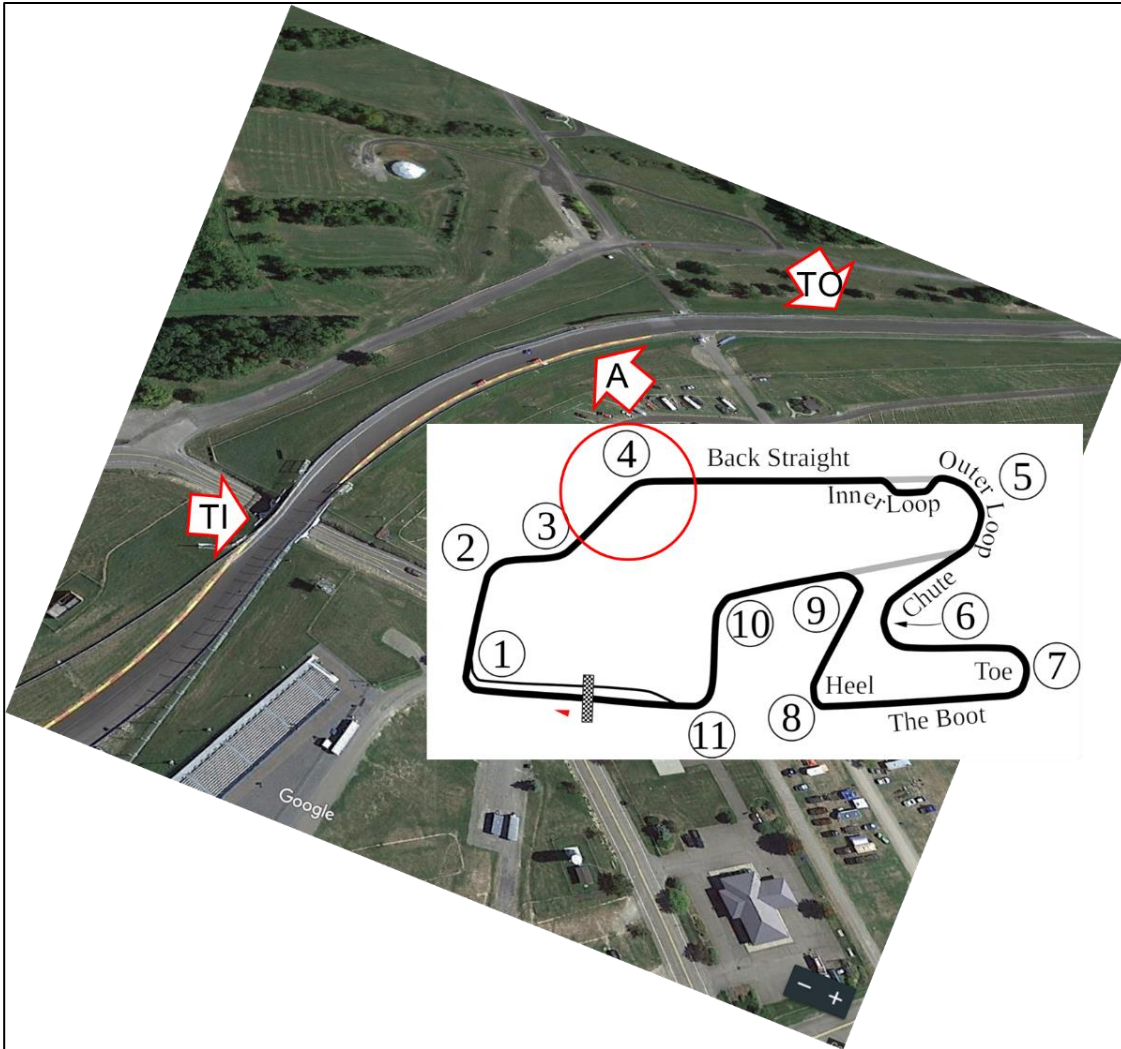
Driving smoothly through the esses requires looking far ahead. These are fast turns and proper vision coupled with gentle steering inputs are the keys.

The apex of Turn 3 is late: past the middle of the red and yellow curbing. We want to stay left and run along the curbing past where it ends. We can add a bit of steering to keep the car left if needed. Then we begin a gradual, gentle turn to the right for Turn 4. Look past the end of the big fence on the right: this will keep your eyes up and ahead. We cross the crown of the track again between Turn 3 and Turn 4 which can make the car feel nervous. We want to be looking way down the track to assure that our inputs are smooth and gentle. Look for the flag station on the right: it is just past the apex for Turn 4.

The car will naturally track out to the left exiting Turn 4, putting you in the left side of the back straight. Now is the time to look in your mirrors and give a pass signal to the right if a car is behind.









Bus Stop (Inner Loop) and Turn 5 (Carousel)

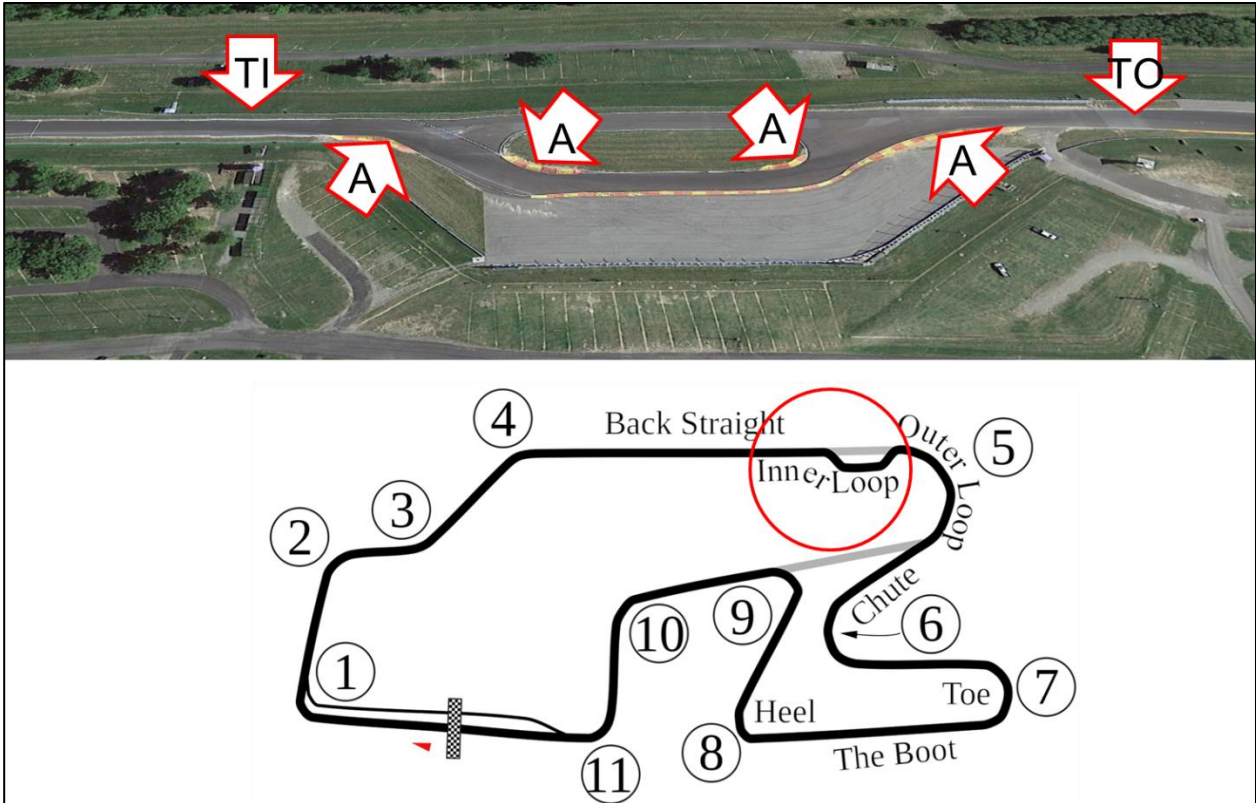
The Bus Stop is a chicane with a right turn immediately followed by two lefts and another right. Done properly, it has a great rhythm and nicely sets up Turn 5 which follows immediately. There are curbs at all 4 apexes of the Bus Stop. While racers, pro's and advanced drivers may choose to drive over some or all of the curbs, that is not recommended for student drivers. It should also be noted that driving over the curbs adds extra stress to your car.

Find a braking point that is comfortable for you and the speed you are carrying. At speed in most Porsches, that will be around the 500 or 400 mark. If you have shifted to 5th gear for the back straight, a downshift to 4th is required. Many drivers make the mistake of going to 3rd gear which may be OK for a beginner but not for advancing drivers. As you gain speed, shifting to 3rd will overslow the car. Plus, we don't need the power from 3rd gear: we need smooth use of the gas.

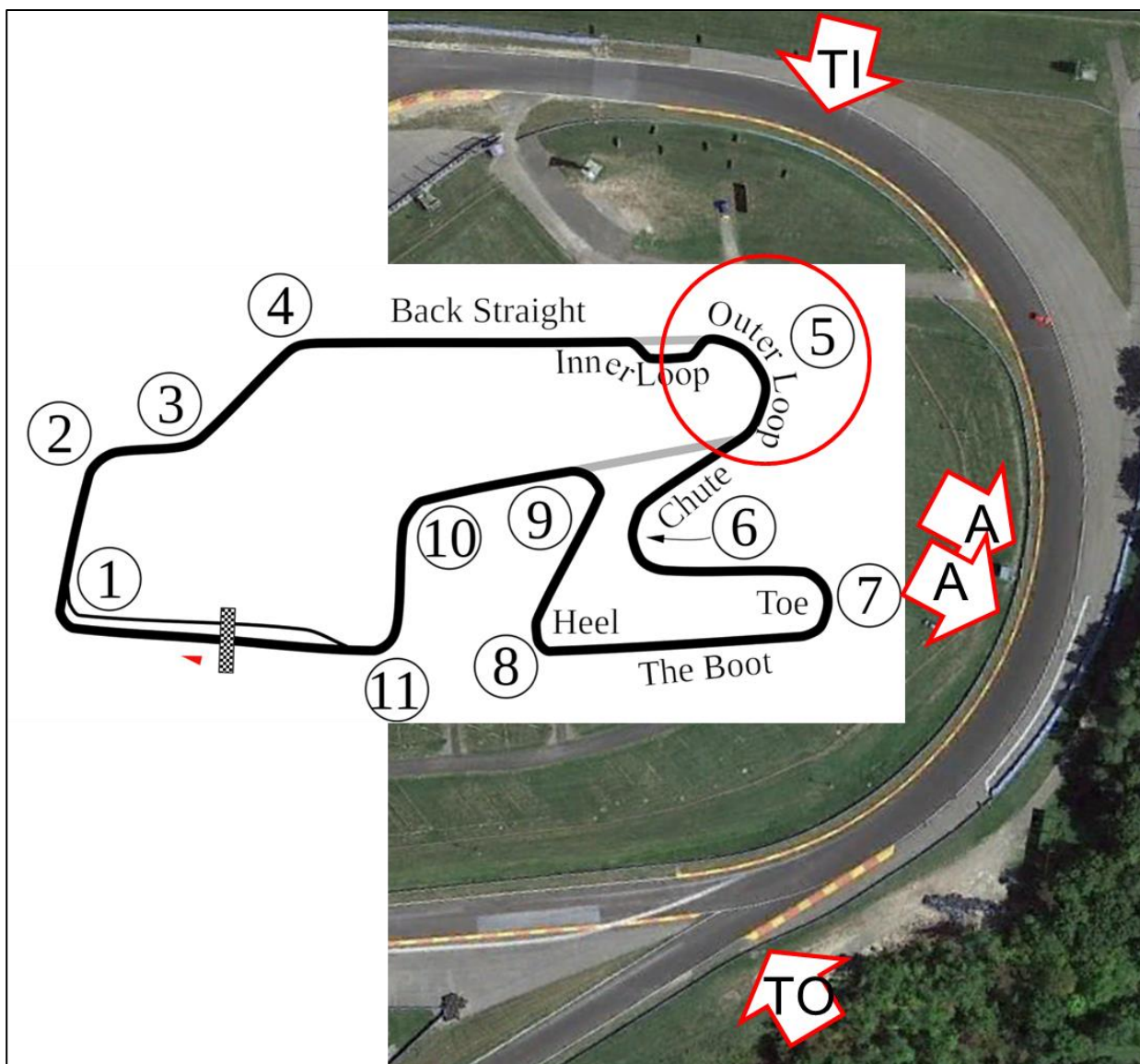
Turn-in is about half way down the wide white stripe at track left. Some trail braking is OK here as long as it is done consistently. The right-hand turn is followed by a quick left. At this point, it is time to pick up the gas. The correct line is one arc for both lefts; on that line the car can be accelerated briskly through the next left and right. The bus stop should "shoot" you into the middle of the track at the exit. We want to be approximately a car width inside the left side of the track at the exit to set up for Turn 5 (also known as the Carousel). Don't go all the way to track left: that puts you in the wrong place for Turn 5.

From the Bus Stop exit, begin to look for the flag station down and to the right. If you've exited the Bus Stop with a lot of pace, lift or brake to begin turning in. We don't want to use more than 1/3 of the track as we head down the hill in 5 but it is a long way to the apex so gentle steering input is required. We use the inside third because the banking is steeper (10 degrees). Turn-in here is key: keep looking at the flag station (the apex) and wind the wheel gently toward it while beginning to feed on gas. Run along the apex curb for 10 to 20 feet or more and track out to the end of the track out curbing. The light at the end of the track out curbing is a good reference point as you come down the hill.





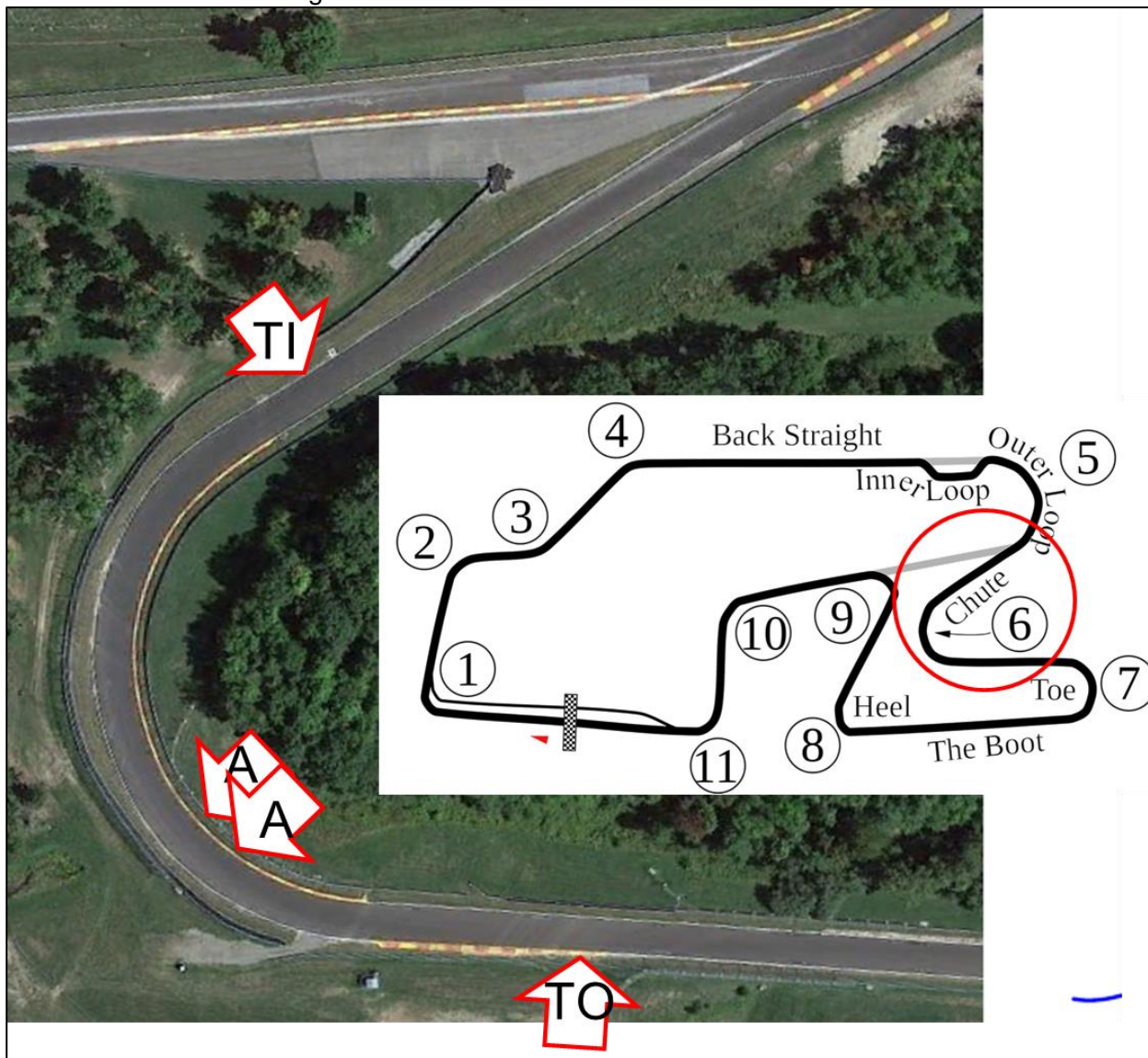
The brief straight section after the Bus Stop before turning for Turn 5 is a passing zone for all groups on the left. It is an easy place to let one car by.



The straight between Turns 5 and 6 is a passing zone. Since the line crosses the track, an early pass is on the right, a later pass on the left. For novice drivers, giving the pass on the left is usually easier.

Turn 6 (the Laces)

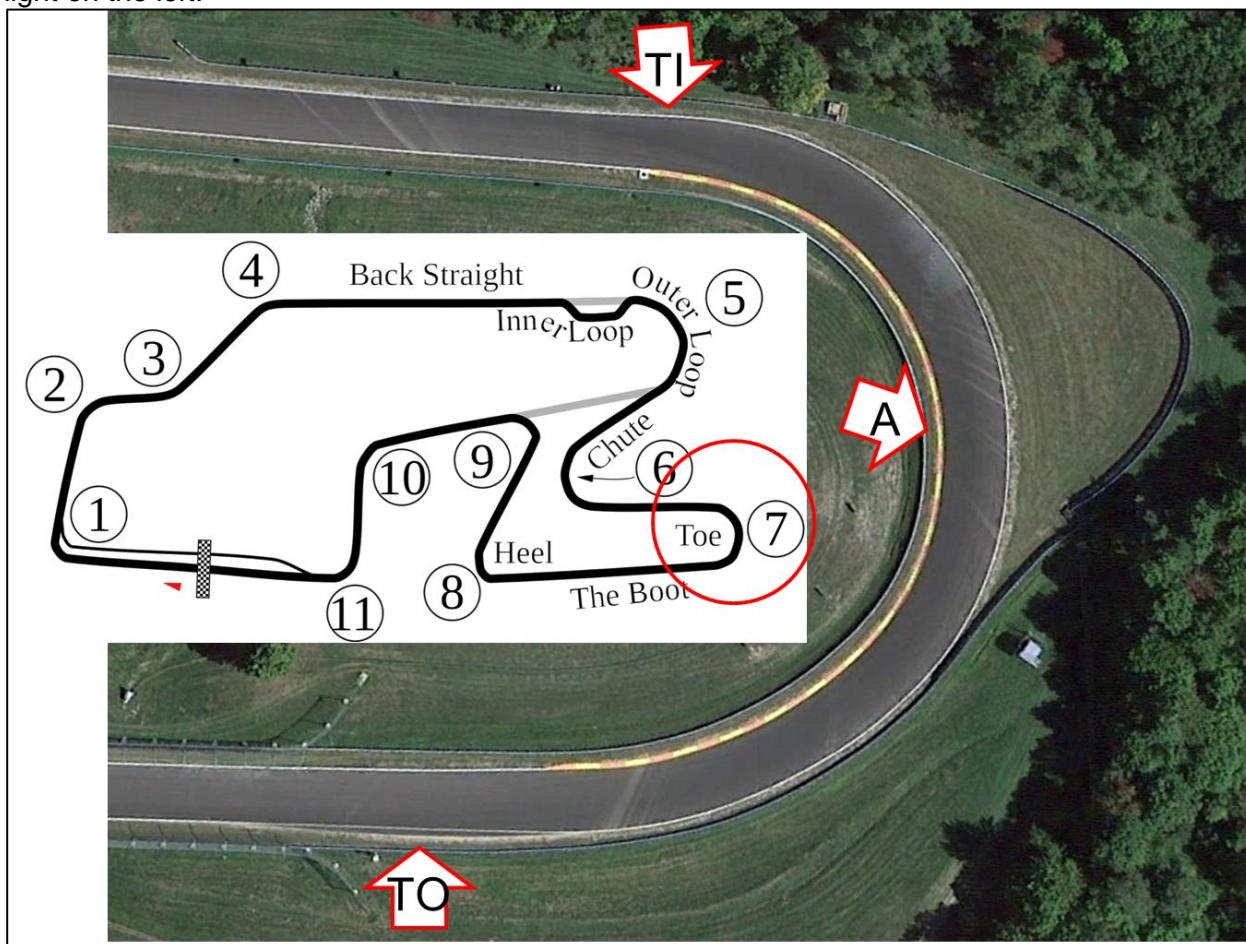
Coming down the hill after Turn 5, look at the flag station directly ahead. It is a good visual reference as you approach Turn 6 (the Laces). Turn-in is between the concrete drain on the right and the beginning of the yellow curb on the left. In all cases, turn-in needs to be gentle and patient. Turn 6 is steeply downhill, more than 120 degrees and feels much longer! That means the apex is blind as we turn in and it's going to take time to get to it. It also means we can trail brake as much as we are comfortable with. Most cars will downshift to 3rd gear though 4th works fine as well. Look as far ahead and to the left as you can to minimize the natural tendency to turn in early and/or hit an early apex. As we approach the apex, the road levels somewhat and we find favorable banking. We definitely want to run along the apex curbing for 10 feet or more as we accelerate. Momentum should take us out to the track out curbing.



The straight between Turns 6 and 7 is a passing zone. Since the line crosses the track, an early pass is on the left, a later pass on the right. For novice drivers, giving the pass on the right is usually easier.

Turn 7 (the Toe)

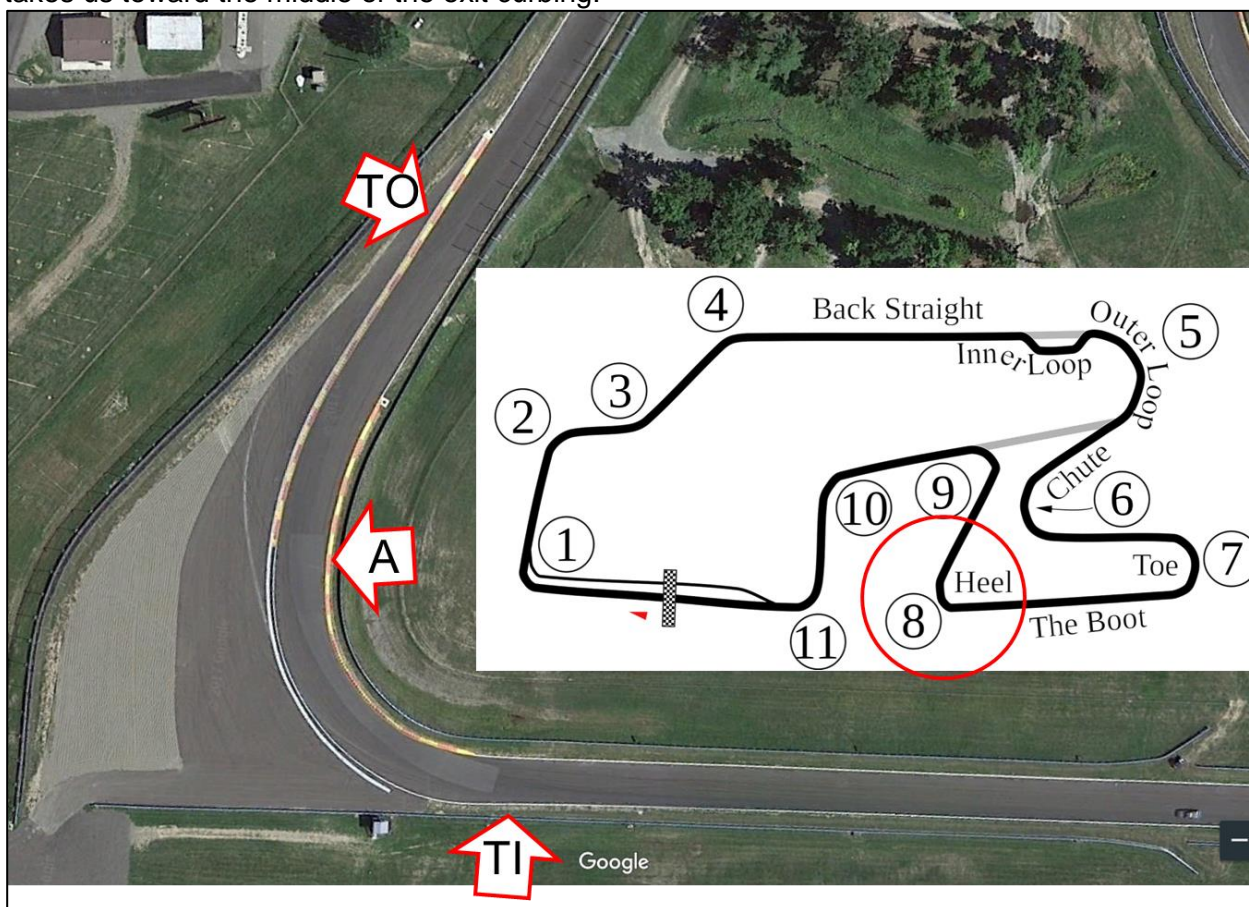
Turn 7 is steep uphill after the downhill section that precedes it. The braking zone begins as we are headed downhill but ends as we begin to go uphill. Most cars will downshift to 3rd gear. Turn-in is where the track widens on the left (which we don't use). Since this is a 180-degree corner, the apex is some distance around. But the uphill compresses the car, generates grip and saps horsepower. As a result, we can begin to accelerate smoothly as soon as the car begins to turn (but not too soon or the car will understeer). By the apex, we can be using a lot of acceleration: foot on the floor in many cars. Momentum should carry the car to the wide part of the track at the exit, by the yellow light on the left.



The straight between Turns 7 and 8 is a passing zone. Passing is on the right.

Turn 8 (the Heel)

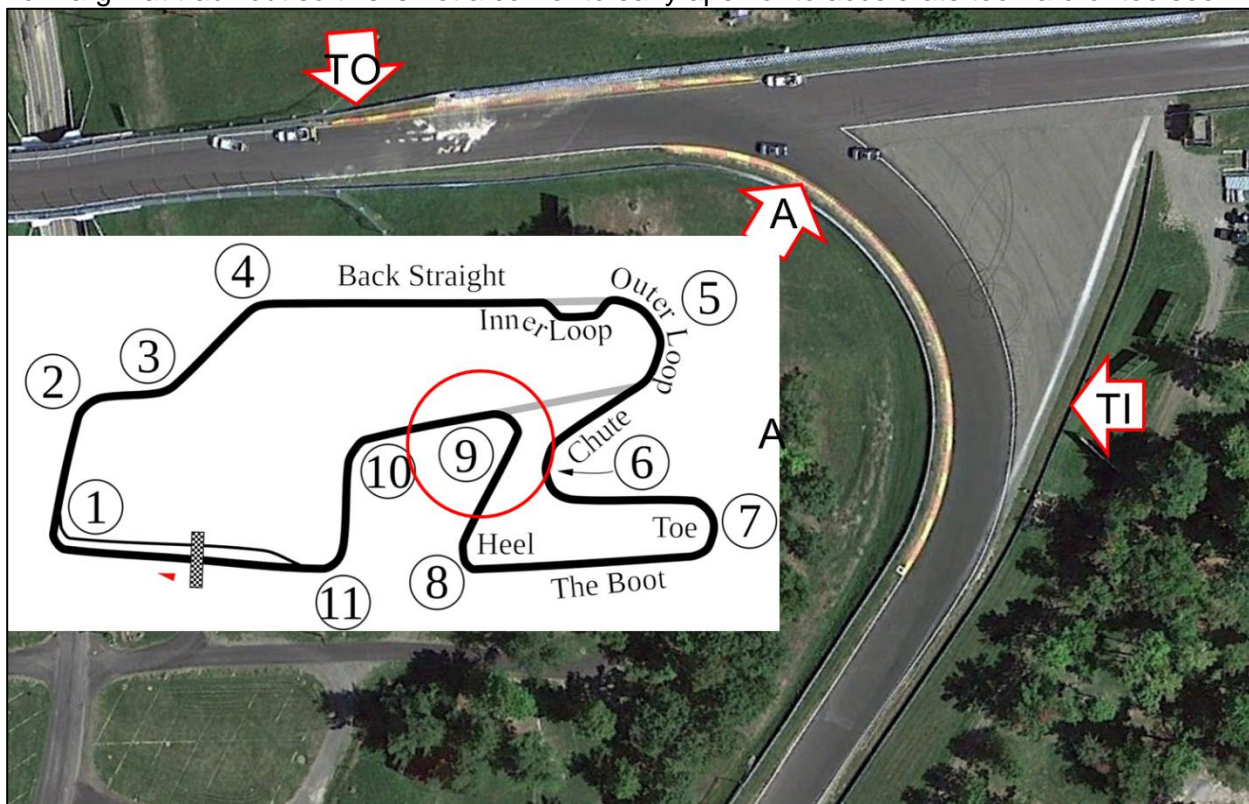
Turn 8 is a much sharper right-hander than it appears: closer to 120 degrees than 90. As a result, it requires patience to let the car have time to turn. Braking is downhill and this corner rewards a reasonable amount of trail braking. Most cars will downshift to 3rd gear. The Turn-in point is approximately 1 car length before the beginning of the right-side curb. From this point, we can't see the apex or track out but they come into view as the car takes a set and starts turning. We should run along the apex curb for a few feet as we begin to accelerate and unwind steering; momentum takes us toward the middle of the exit curbing.



The straight between Turns 8 and 9 is a passing zone. Since the line crosses the track, an early pass is on the right, a later pass on the left. For novice drivers, giving the pass on the left is usually easier.

Turn 9 (the Off-Camber)

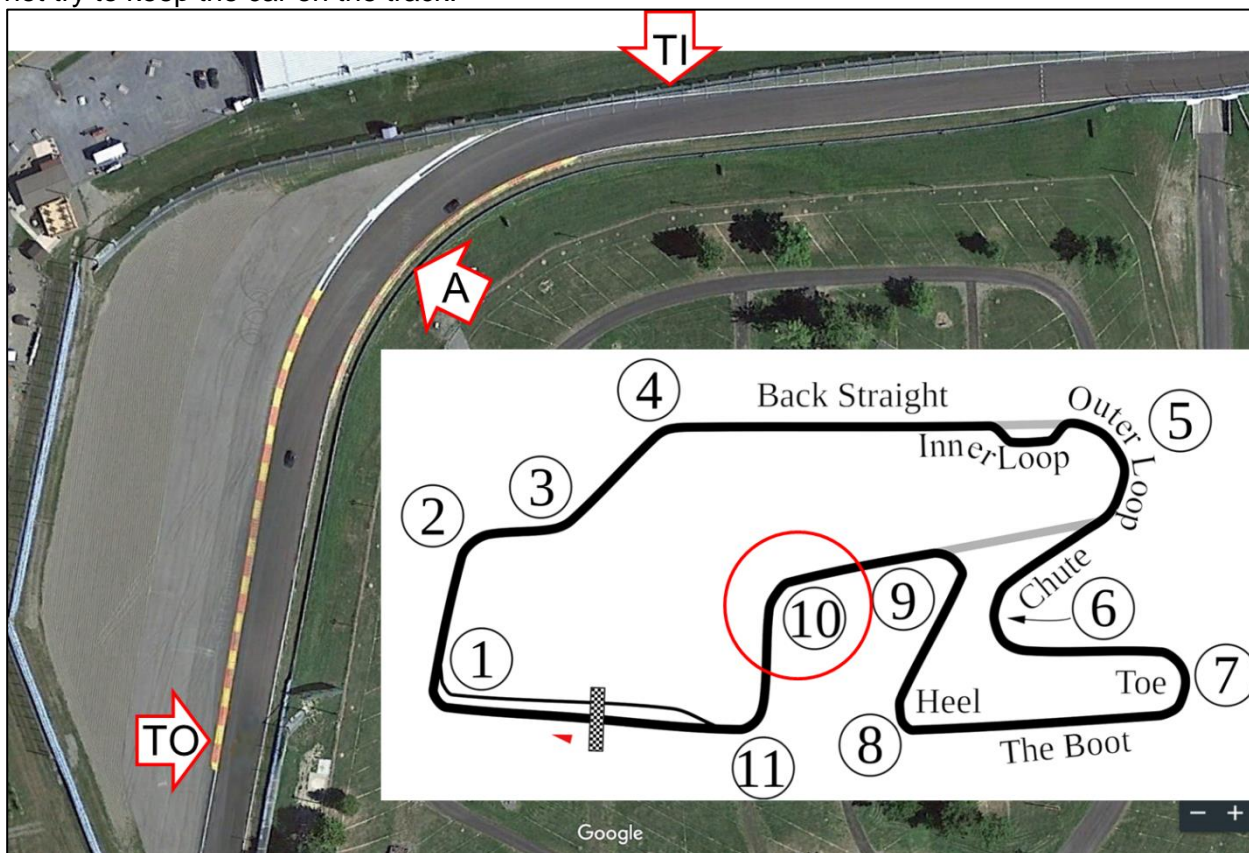
Like Turn 8, Turn 9 is also much more than 90 degrees, this time to the left. Unlike other corners at Watkins Glen, it has no favorable banking (camber) since it is a flat section of the short course used by Nascar. As a result, this corner (even more than others) rewards smooth braking, turning and acceleration. Braking can begin at the bottom of the approach hill; use the hill for most of your braking. Most cars will use 3rd gear. As the car crests the hill, relax the brakes but don't fully release. As the car settles, turn in slowly and gently (remember it's a long corner). This Turn-in point corresponds to the big billboard at track right. Some trail braking at Turn-in and after works fine here. The apex is blind even from the Turn-in so patience is definitely required. It's OK to run along the apex curbing here. As the apex and track out (the beginning of the tall fence on the right) come into view, it is possible to smoothly transition to gas and begin to gently accelerate. There is absolutely no margin at track out so this is not a corner to early apex or to accelerate too hard or too soon.



The chute between Turns 9 and 10 is a passing zone on the left.

Turn 10

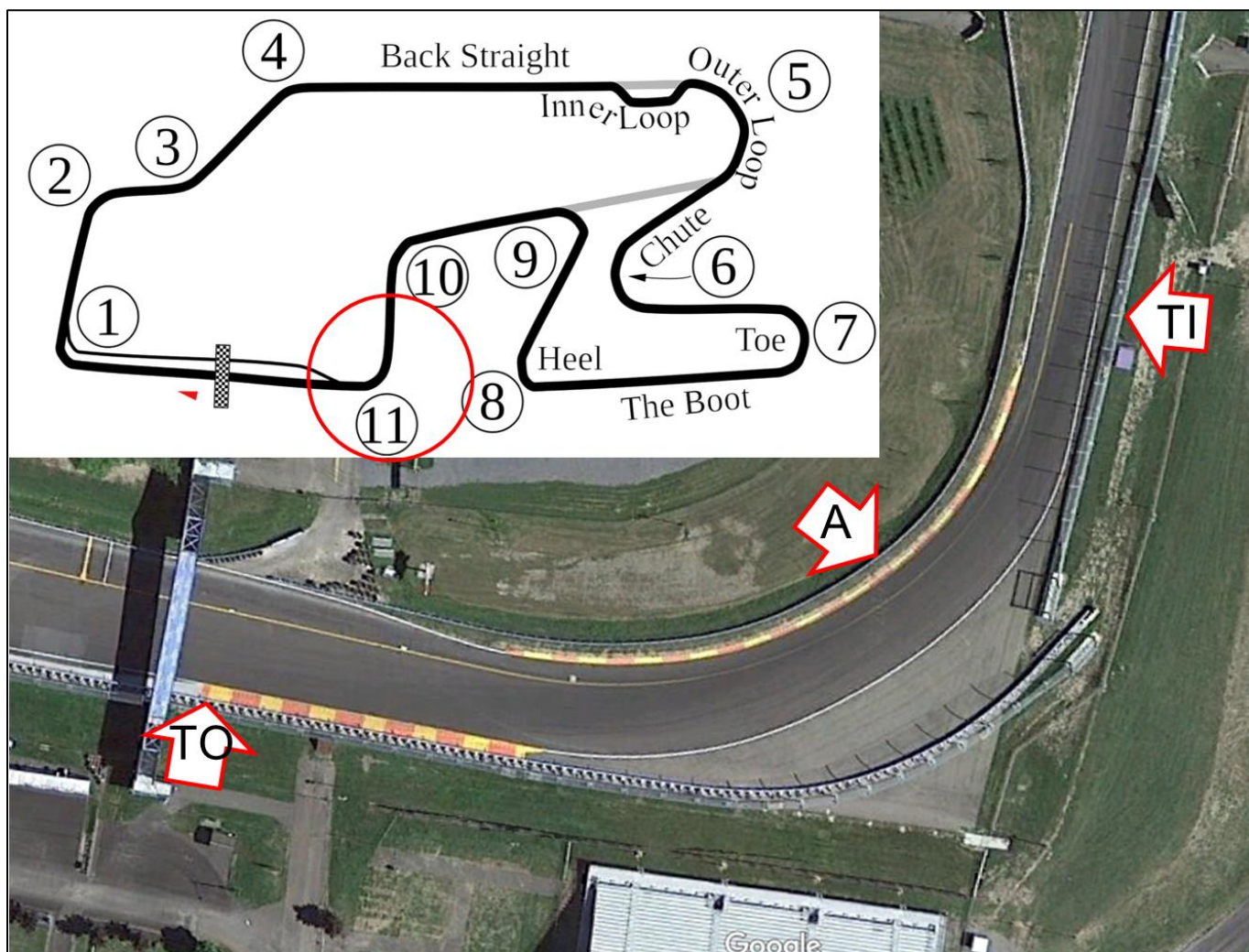
Turn 10 is a very fast left hand turn driven very different than the previous several corners. We do need some brake but it must be done in the straight before Turn-in. It's better to brake longer and lighter to not upset the car. Braking and any downshift (not recommended for most cars) should be complete by the 100 marker. Turn-in is just past the yellow signal light. It may help to add an additional bit of steering as you approach the apex. Unwind the wheel as you accelerate past the apex. Favorable banking and elevation change mean lots of grip for the acceleration. If you do find yourself with an early apex or too much gas, drive over the track out curb onto the paved area: do not try to keep the car on the track.



No passing between Turns 10 and 11 except for Extended Passing in Red and Black.

Turn 11

Turn 11 is a relatively fast right-hander that leads onto the front straight. Some braking is required and should be done gently to avoid upsetting the car. A small amount of trail brake is OK but not much. A downshift before Turn 11 is not recommended; better to carry momentum in a higher gear. The Turn-in point is a few feet before the signal light on the left; sometimes it's possible to see the Turn-in dot painted at track left. The apex is more than half way around the corner, but not as late as many corners. As soon as you turn in and line up the apex, begin to transition to the gas. Smooth acceleration from the apex onward should carry the car to the exit curbing. The visual from the Turn-in is the bridge which corresponds with track out. From the apex, get your eyes down track to the start/finish flag stand.



The front straight is a passing zone with all passing on the right.

We hope you've found this description of how to drive Watkins Glen useful. Have fun!

