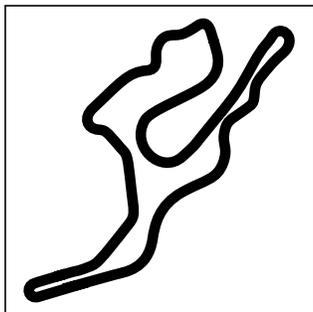

Nor Cal SAAC Course Maps - Sears Point

Scott Griffith



This booklet, and its companion text, the “Nor Cal SAAC Open Track Driver’s Primer”, were written in an effort to provide a head start to the first time driver at a Nor Cal SAAC open track event. Together, they should help the new driver come to their first event educated, prepared, and in a frame of mind that will allow the ground school portion of the first morning to be gotten through quickly and easily. The more of this information you can learn before the event, the less time we’ll have to spend on it at the event. This will immediately result in more track time for you. And that’s the point!

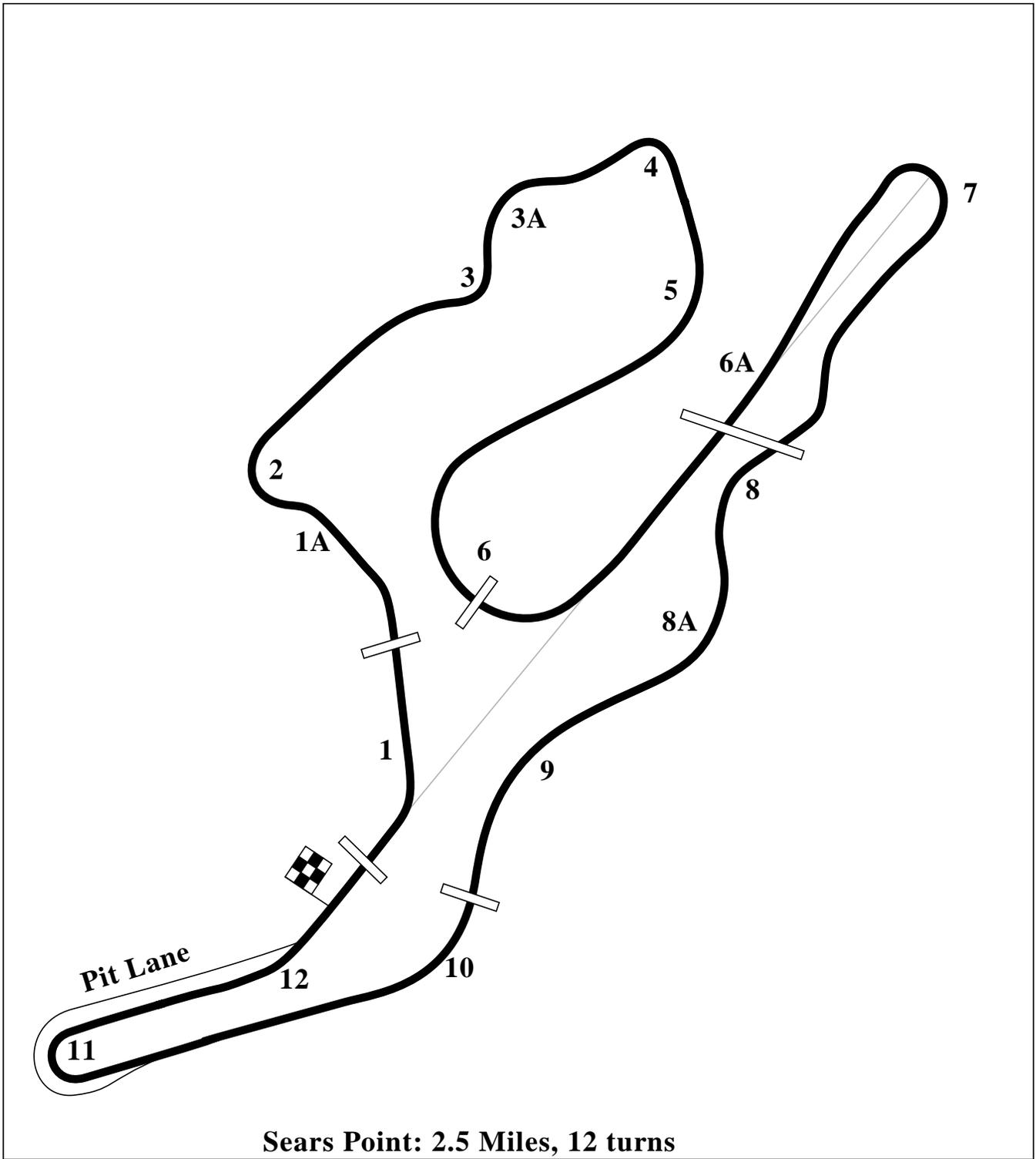
What’s Inside?

This book contains a map of Sears Point, and provides a corner-by-corner analysis of the racing line. The idealized line we’ll discuss is what we’ll call the “school line”, and it is the safest, easiest to learn, and most rewarding way around the track for a beginner. As you gain experience, you’ll come to find places that your own personal preferred line will differ from what we’ll describe here. That’s normal, and is a sign of experience. If you think about it, you’d expect that a Porsche 911 would need to take a little different corner entry or exit than a Shelby Mustang, for example. But when you’re starting out, the school line we’ll talk about will serve you well.

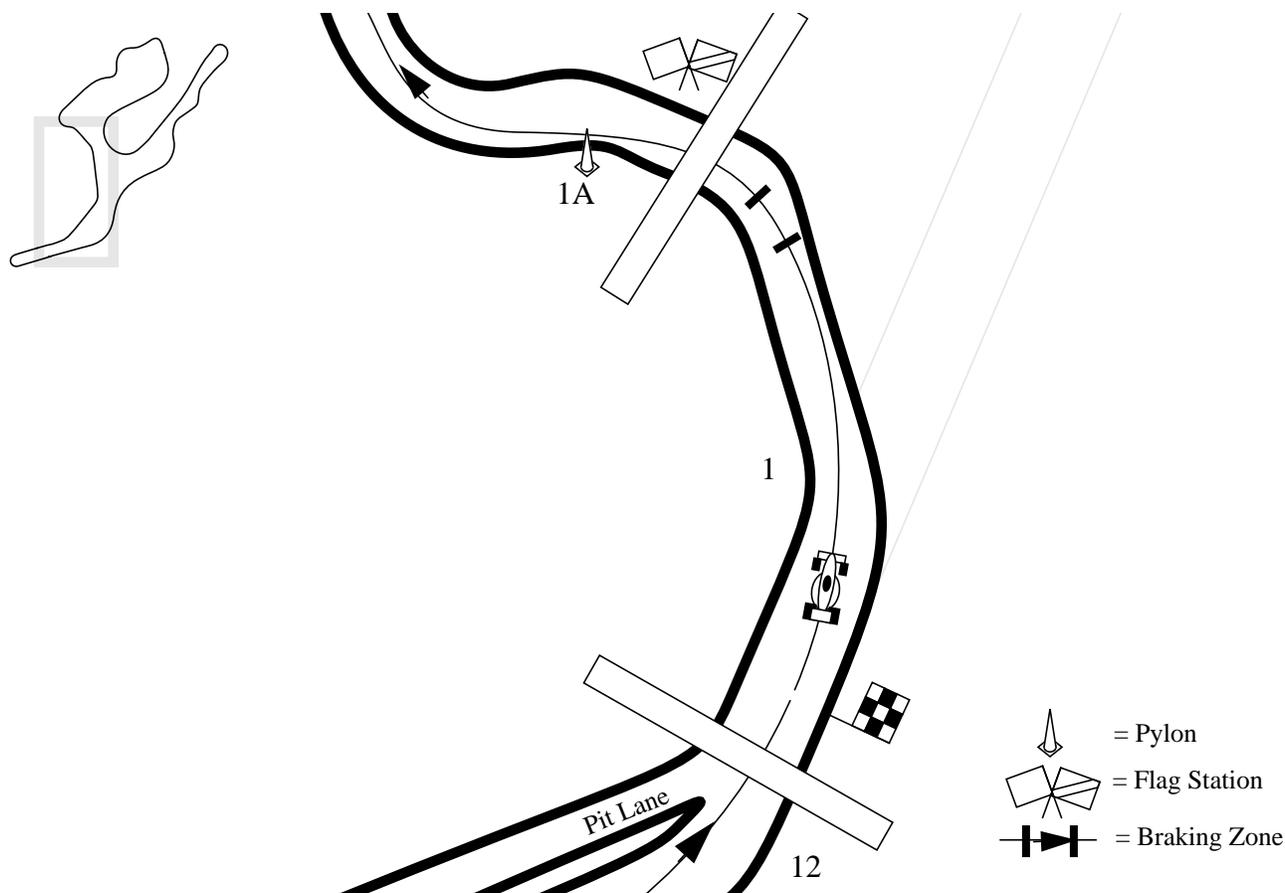
Additionally, in the description of each corner, you’ll find information about landmarks and important safety features, such as where the cornerworkers put their flags, and where there are escape roads and so on. There’s a lot of information in here, and we don’t expect you to have any of it memorized verbatim when you get the track. There won’t be a quiz! But it is very useful to have a good idea of which way the track goes, and the general feel of the terrain, before getting to the track. This will allow you to focus on the art of driving, rather than merely trying not to get lost.

Finally, in the descriptions of each corner, you’ll find that the location of the turn-in and apex points will be marked out. These points will be marked with cones set up beside the track surface for your first few sessions. They are a useful reference, but please make an effort to learn the track, not the cones. If they get knocked down, or if we decide not to set them up at all, you should still be able to feel the line and drive the course well. This is track driving, not paint-by-numbers!

Having said all that, let’s get on with the fun. Following this, you’ll find our description of the track. The car seldom spends much time going straight here. It has been said that you never know what the words “hilly” and “curvy” mean until you have driven Sears Point!



Sears Point



Turns 1 and 1A

The map above is not to scale. This section is a very large portion of the entire track! Turns 12, 1 and 1A are really taken as a unit. Turn 1 is a high-speed, uphill, fourth gear, decreasing radius lefthander of about 60 degrees that simply continues the arc begun by Turn 12. Turns 12 and 1 are best thought of as a “bent straight”, and they are used as a passing area. The track turns steeply uphill after the second “apex”. Turn 1 is really not a difficult turn, but it is very fast and very daunting. The track narrows abruptly as you cross over Start/Finish and turn off the drag strip onto the road course. It is critical to position the car properly for the steeply uphill Turn 1A. The true apex of this whole complex is way up the hill at Turn 1A.

Set up: Allow the car to drift naturally out to driver’s right under the Starter’s stand exiting Turn 12. The Start/Finish bridge also marks the end of the front straight passing zone.

Braking Zone, Turn 1: None. Turn 1 is taken flat in most cars, or perhaps with a small confidence lift off the throttle just before the steepest part of the hill at Turn 1A. Taking Turn 1 hard on the throttle is something to work up to very slowly and gently, but it is a great confidence exercise.

Turn In, Turn 1: Hold the gentle steering lock you used in Turn 12 all the way until the turn decreases in radius at Turn 1A, just after the uphill bridge. Allow the car to run out well towards the driver’s right edge of the track as you begin to go up the hill, A smooth, wide arc that does not upset the chassis is the key to this section.

Apex, Turn 1: No apex, in the traditional sense of trying to “clip” the inside. The apexing is all done in Turn 1A, after the uphill bridge. Carve a wide, smooth arc, ignoring the first two “apexes”. The goal is to get to the turn in for Turn 1A right in the center of the track on a smooth arc.

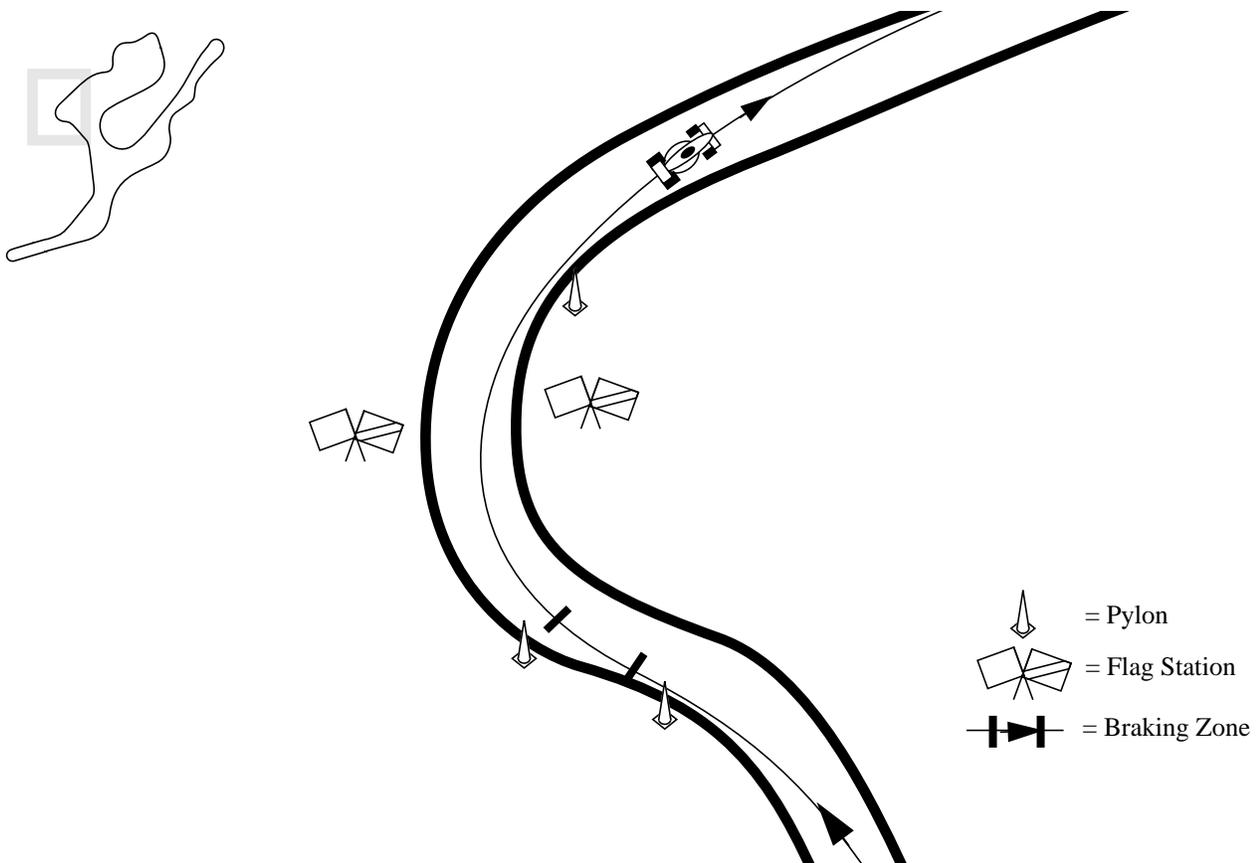
Braking Zone, Turn 1A: Light braking just before the track turns steeply uphill at the second bridge. With practice and confidence, this is done with just a lift. It is actually done flat on the throttle, in competition. This isn't competition, so treat this corner with a great deal of respect, as it is very fast in a high-horsepower car.

Turn-in, Turn 1A: Smoothly tighten the steering lock just as the track turns steeply uphill. The abrupt slope change gives additional grip. Your goal is to rotate the car, to get to the single very late apex for the whole complex which is driver's left way up at the top of the hill. At speed, it can feel very much like trying to drive into a phone booth at 100mph, and still hit the slot with your dime. This is big fun!

Apex: Extremely late, single apex. You will stay all the way driver's left, parallel to the edge of the track.

Exit: Unwind the wheel, staying all the way driver's left, leaving a 3-4 foot safety margin on the run up to Turn 2.

Landmarks: There is a flagger station in the middle of the steepest part, driver's right after the upper bridge. You'll have to look up to see it, but it is ideally placed to give you advance warning of conditions in Turn 2. When reentering the track from the pit lane, please stay all the way left on the front straight until the track turns off the drag strip. This keeps you from merging into the path of a car that's at full song until you've had time to accelerate.



Turn 2: the Chute

Turn 2 is a slow, second gear, 110 degree, off-camber turn. The entry is uphill, the apex is at the top of the hill and is blind, and the exit goes off camber and slightly downhill. All in all, it is a thoroughly challenging turn. The braking here is very heavy, although short, as you slow from 4th gear to second.

Set up: Stay all the way driver's left exiting Turn 1. Get the car straightened out, and prepare for the braking ahead.

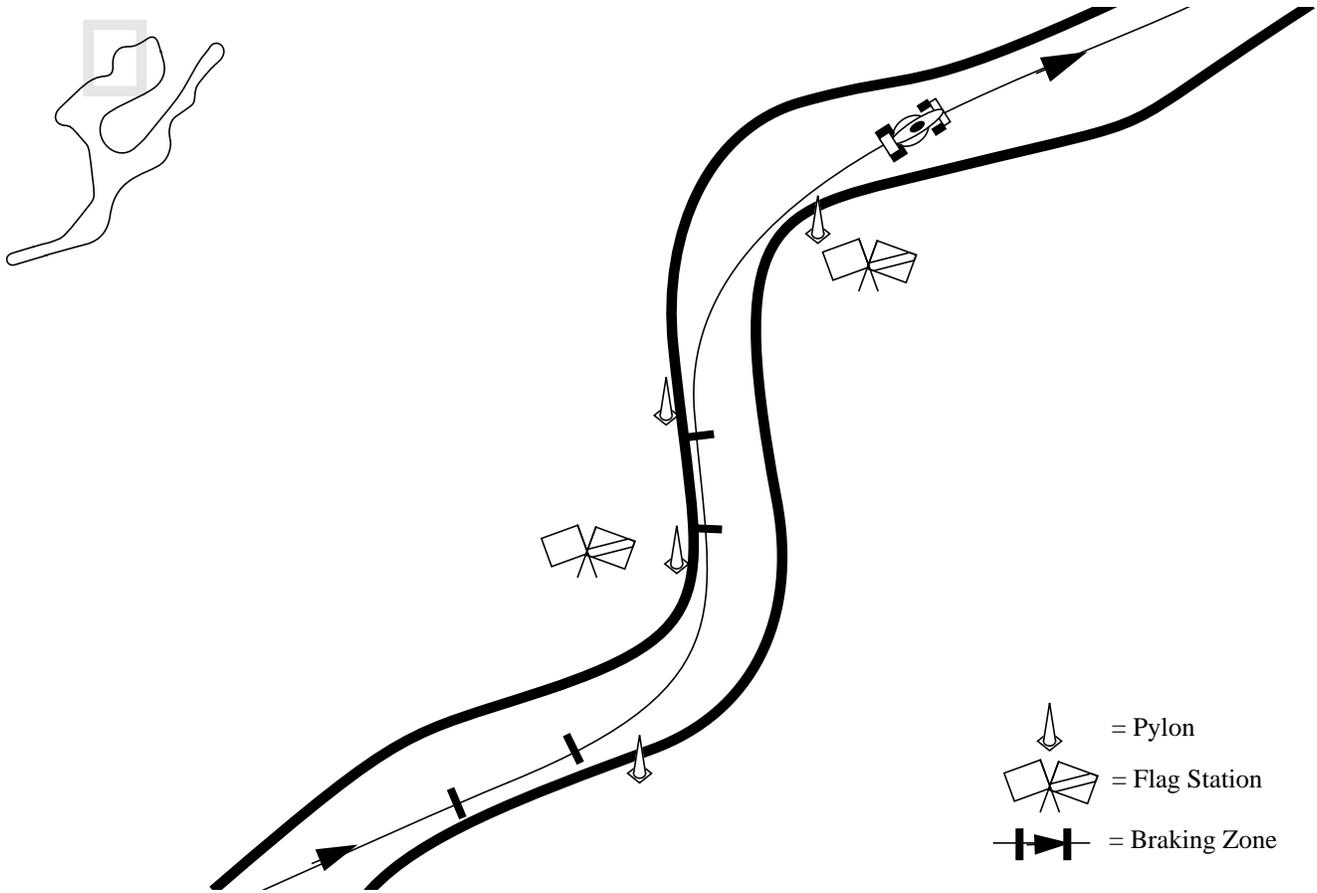
Braking Zone: Very early, very hard, straight line braking, just as soon as the car is straight after the apex of Turn 1A. Downshift into second in most cars. Transition off the brakes and back onto an even throttle before the turn-in point. The hill flattens out partway through this corner, unloading the suspension. It's not as fast as it looks, and is a great place to get backwards.

Turn In: Turn smoothly in after you finish your straight-line braking. After turn-in, stay out about half of the track width until well into the corner, then smoothly tighten in the steering to rotate the car. You want to have most of the turning done *before* the track flattens out and goes off camber at the top. Take a single, very late apex.

Apex: The apex is well around by the painted curbing, almost 3/4 of the way through the turn. You should be rolling on the throttle from before the apex. Unwind the wheel and smoothly feed on the power from the apex on. Many people like to launch the inside wheels of the car up in the air off the berm, like the NASCAR stock cars. It's dramatic, and makes for a great picture. But it upsets the chassis, so don't do it.

Exit: Unwind the wheel, roll on the power, and track out all the way driver's left. Done correctly, you can leave just a tiny bit of steering lock on, track out with a 3 foot safety margin, and sweep smoothly back to the driver's right edge of the track just as you get to the little unnamed kink before Turn 3. Upshift to third right at the exit. Don't drop 2 wheels off the edge!

Landmarks: There is a very important flagger's station driver's right in the middle of the corner. There is little runoff area, and a tirewall that beckons. There is little grip at the exit, after the top of the hill. Treat this corner with respect!



Turns 3 and 3A: the Crown

Turns 3 and 3A form a medium-speed, third gear, uphill complex. The track is a bit featureless in the Turn 3 entrance area, with few reference points, and many people have a hard time getting their turn-in right. The straight from Turn 2 runs downhill, and the track turns steeply uphill right at the apex of Turn 3. Turn 3a is very similar to Turn 2, with an uphill entry, off camber apex, and downhill exit. A popular error in Turn 3 is to turn in too early, which results in drivers being completely lost as they try and find their way through Turn 3A.

Set up: Move smoothly back to the driver's right edge of the pavement after exiting Turn 2. Leave about a 3-foot safety margin to the edge of the pavement. Get the car straightened out by the small unnamed kink, and prepare for the braking ahead. The safety margin is important here, as the edge of the track is sandy and there is little grip to be had.

Braking Zone: Straight line braking on the downhill before the turn. Stay in third in most cars. Transition off the brakes and back onto an even throttle before the turn-in point.

Turn In, Turn 3: Get the car settled in a straight line on the very outside edge of the pavement, and then turn smoothly in. There will be a turn-in point marked out with a pylon to use as a reference during the morning sessions. Smoothly wind in the steering to get to a late apex just past the geometric center of the turn.

Apex, Turn 3: The apex is just past the geometric middle of the turn. There will be an apex pylon to use as a reference. Once at the apex, begin to unwind the wheel, but stay on the extreme driver's left edge of the pavement. We compromise the exit of Turn 3 to get Turn 3A right. If you can't keep the car on the left edge of the track, you know you braked too little or you turned in too early.

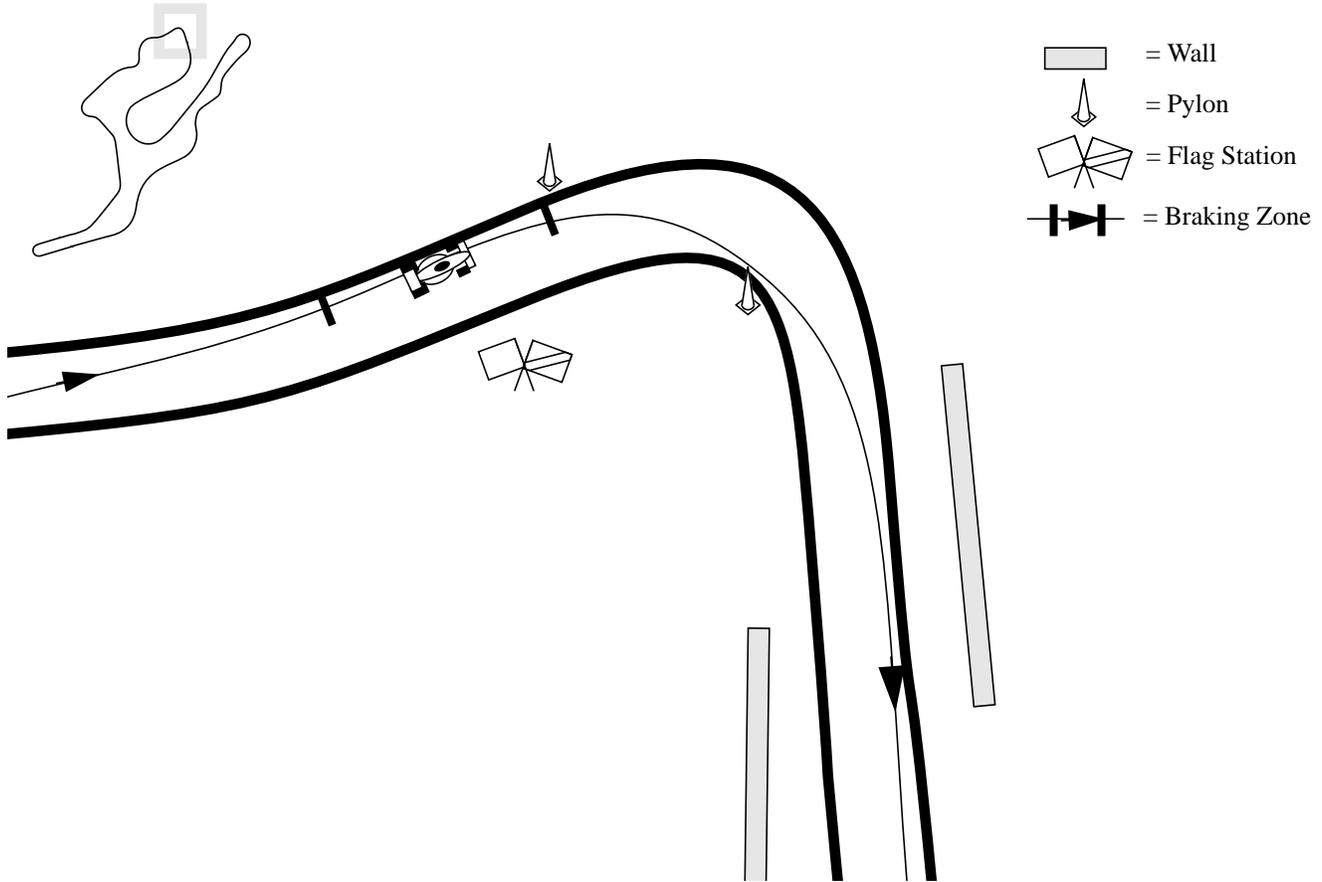
Braking Zone, Turn 3A: Short, hard straight line braking after the car is settled on the uphill.

Turn In, Turn 3A: Turn smoothly in after you finish your straight-line braking to rotate the car. You want to have most of the turning done *before* the track flattens out and goes off camber at the top. Take a single, very late apex.

Apex, Turn 3A: The apex is extremely late. You must have all the turning done before the track falls away at the exit, or the chassis will unload and you'll end up with two wheels in the dirt. You should be rolling on the throttle from before the apex. Unwind the wheel and smoothly feed on the power. Once again, avoid launching the car off the berm at the apex.

Exit: Unwind the wheel, roll on the power, and track out driver's left, leaving a 3 foot safety margin. Don't drop 2 wheels off the edge. There is no runoff to speak of, and what there is is very rutted and bumpy. Keep all four wheels on the track through this section, which can be very difficult. If the driver's left edge of the track jumps over to greet you at the exit, you know that you turned in too early. You must have all the turning done before the track falls away at the exit!

Landmarks: The Turn 3 and 3A flagger's stations are right in the center of the turns. The station at 3A is very important because of the blind nature of the corner. You must look at it each lap to see if the track ahead is clear.



Turn 4

Turn 4 is a medium-speed third gear, downhill turn. It decreases in radius as you go through it. This turn has a very heavy downhill braking zone, and the turn-in is difficult to judge. There is essentially no runoff room, so it is very daunting.

Set up: Stay on the driver's left edge of the pavement after exiting Turn 3. Leave about a 3-foot safety margin to the edge of the pavement.

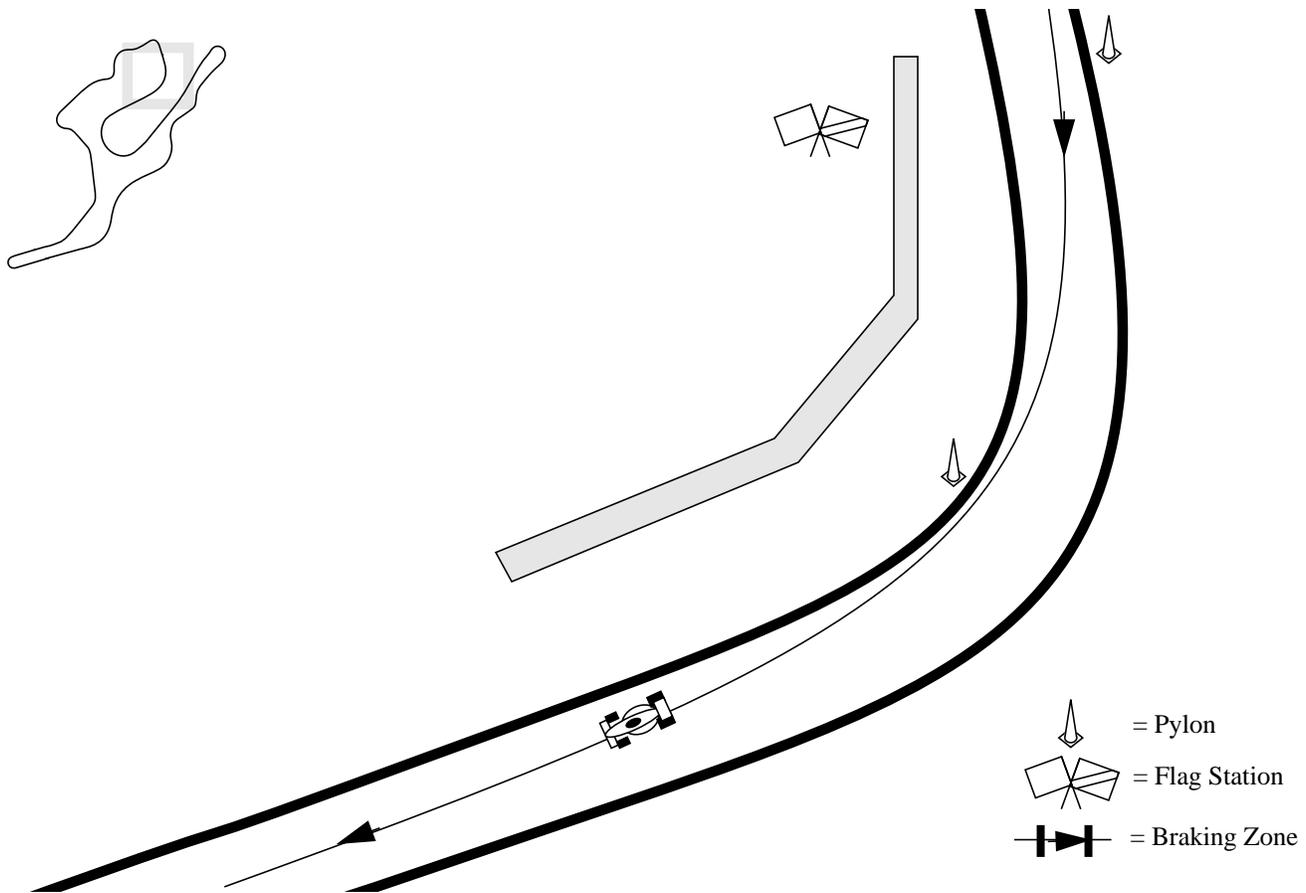
Braking Zone: Very hard straight line braking. Transition off the brakes and back onto an even throttle at the turn-in point.

Turn In: Turn smoothly in from the turn-in point. Do not turn in too early! This is a very hard place to get the judgement right, and almost everyone turns in too early, and scares themselves at the exit.

Apex: The apex is just past the geometric middle of the turn. There will be an apex pylon to use as a reference. After the apex, unwind the wheel and feed on the power. If you can't unwind the wheel, or if you have to wind on more steering just to stay on the track, you know you turned in too early.

Exit: Track out all the way driver's left, but leave about a 3-foot safety margin. If you hold on just a tiny bit of right steering lock after the exit, the car will naturally sweep back across driver's right to set you up for Turn 5. Most drivers will need to upshift from third to fourth just as they track out. Use the curb at the exit if you must, but don't let the car hop over it.

Landmarks: The Turn 4 flagger's station is driver's right at the entrance. Do not allow yourself to turn in too early. When you do it anyway, maintain an even throttle and steer through it. Don't suddenly lift out of the throttle, or you will spin the car, and the walls await the incautious driver. Many people find Turn 4 to be one of the hardest parts of the track to learn.



Turn 5

Turn 5 is a high speed, fourth gear, banked sweeper. Downhill at the entrance, it turns uphill about halfway through the turn, which makes it a faster corner than it first appears.

Set up: Stay on the driver's left edge of the pavement after exiting Turn 4. Leave about a 3-foot safety margin to the edge of the pavement. Short-shift into 4th in most cars.

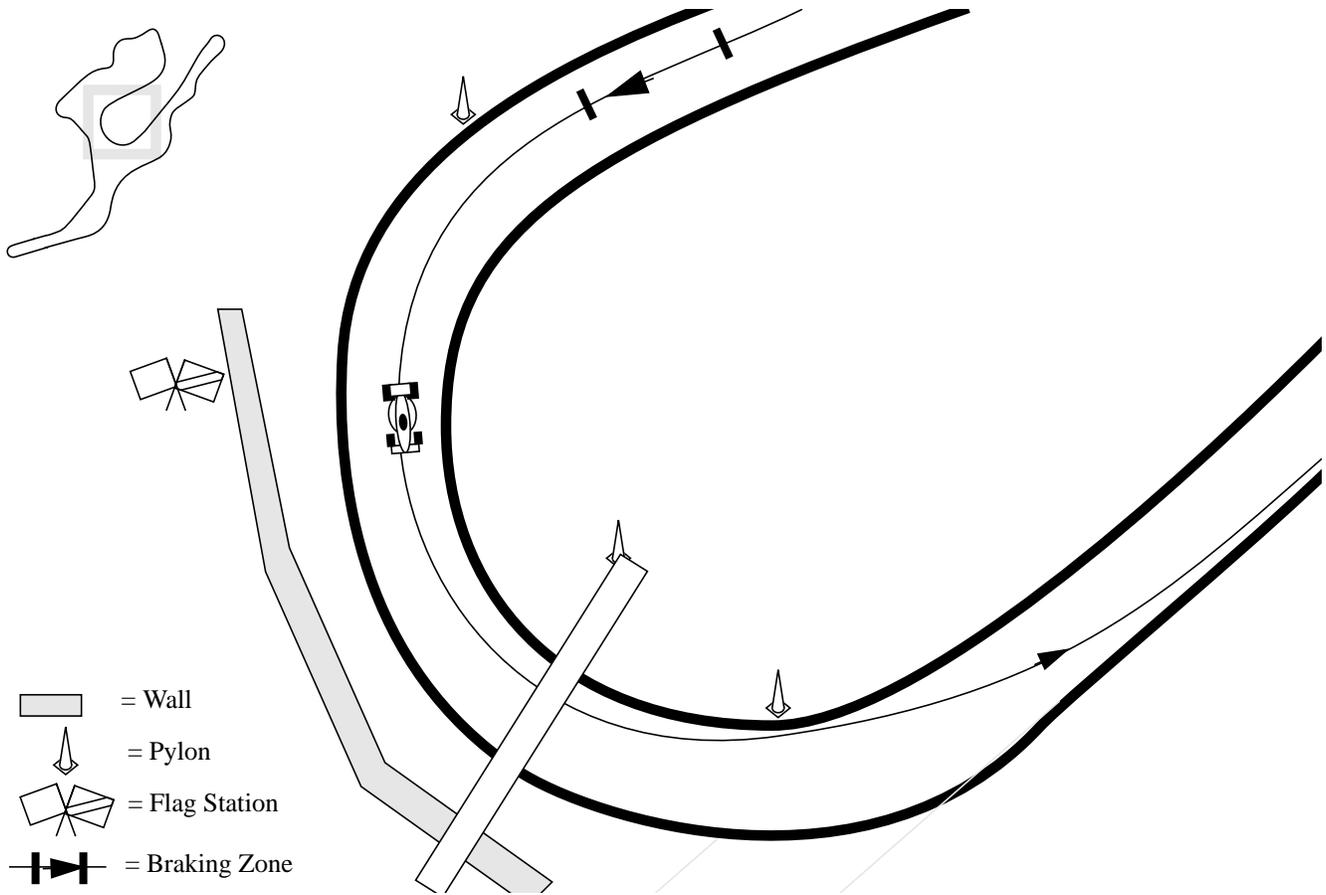
Braking Zone: None. This turn is taken flat on the throttle.

Turn In: Smoothly squeeze on more steering lock at the turn-in point, and sweep over towards the apex.

Apex: The apex is just past the geometric middle of the turn. There will be an apex pylon to use as a reference. The banking throughout the corner will provide extra grip. Unwind the wheel and feed on the power. If you can't unwind the wheel, you know you turned in too early.

Exit: Unwind the wheel and let the car track out into the center of the track for the uphill straight to Turn 6. Have all your turning done, and the car in a straight line, before the hill between Turns 5 and 6.

Landmarks: The Turn 5 flagger's station is right at the edge of the track after the turn-in. There is minimal runoff area, but lots of banking and lots of grip. Use the banking to your advantage, and don't lift!



Turn 6: the Carousel

The Carousel is a long, sweeping, third gear, 190 degree turn. It flattens out at the bottom of the hill as it rejoins the drag strip.

Set up: Stay close to the middle of the pavement after exiting Turn 5. Get the car straight and settled on the uphill out of 5.

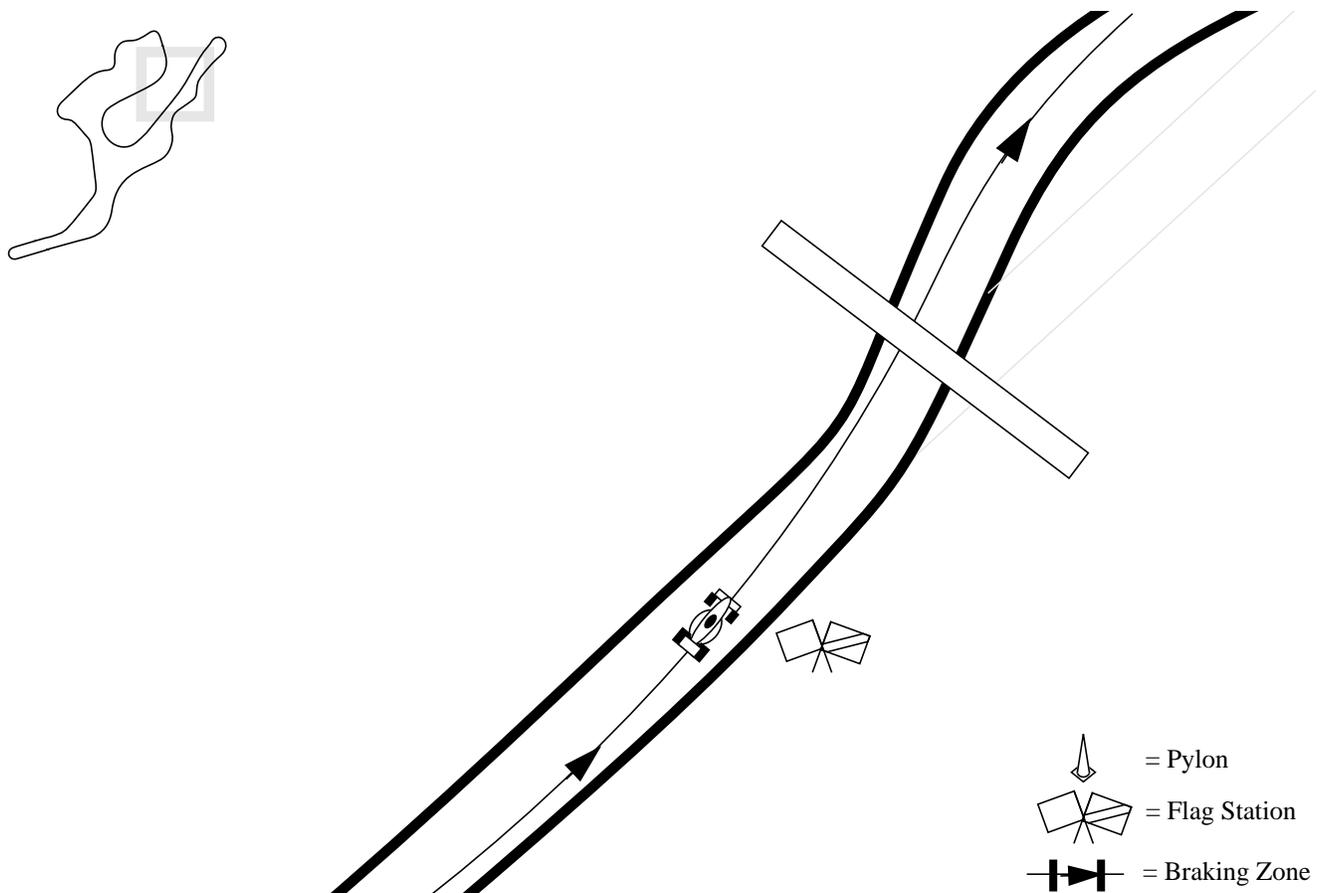
Braking Zone: A short burst of hard, straight line braking, just before the highest point on the straight. get your braking done and have the car straight before the crest in the track, Downshift 4-3, if necessary. Transition off the brakes and back onto an even throttle at the turn-in point, after the track turns downhill.

Turn In: Turn smoothly, holding the car in roughly the middle of the track for the first half of the corner. There is substantial banking there for better grip. There will be a turn-in pylon to use as a reference during the morning sessions.

Apex: The apex is extremely late, down past the bridge and on the flat portion where the road course rejoins the drag strip. There will be an apex pylon to use as a reference. Squeeze on additional steering lock after halfway through the corner, and bring the car over to driver's left for the apex. Roll on the power from well before the apex. The slope change and banking in the apex area will provide extra grip. Unwind the wheel and feed on the power.

Exit: Unwind the wheel, hard on the power, and let the car track out all the way driver's right for the uphill straight to the Kink and Turn 7, but leave about a 3-foot safety margin. Most drivers will upshift from third to fourth just after the apex.

Landmarks: The Turn 6 flagger's station is high above the tirewall at the turn-in. Get your braking done, and the car settled, *before* the crest on the short chute from Turn 5. Once again, use the banking to your advantage, and don't lift!



Turn 6A: the Kink

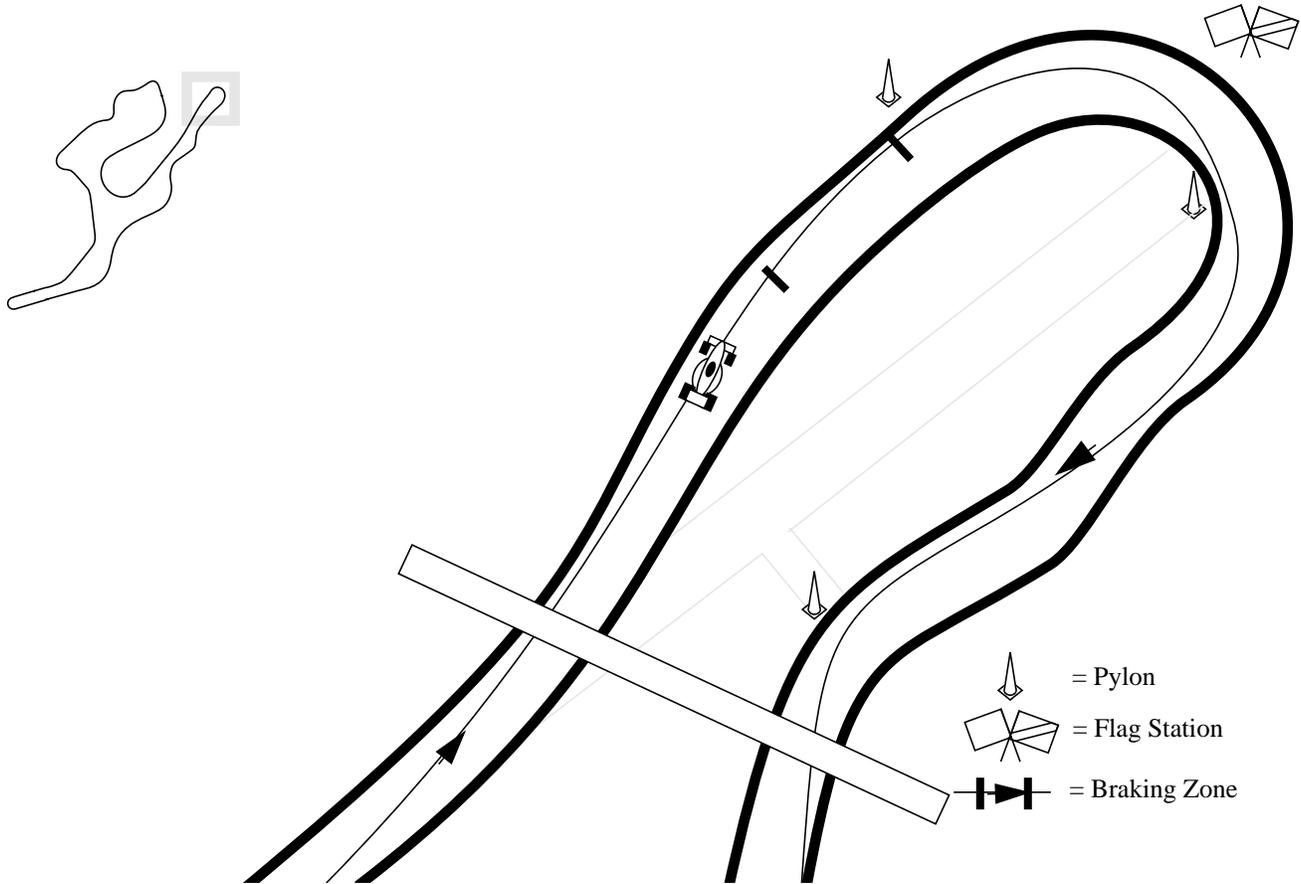
The Kink is a high-speed little flick, created where the road course moves off the drag strip pavement. It is taken flat in fourth gear, and normally wouldn't even merit a mention. However, it is located in the middle of a passing zone, so cars might be attempting to overtake on the left, as you move naturally over to "apex" the Kink. This is a good place to check your mirrors to avoid any surprises.

Set up: Unwind the wheel exiting the Carousel, and allow the car to drift all the way out driver's right, leaving about a 3-foot safety margin. Holding on just a little steering lock will allow the car to sweep naturally back to the driver's left edge just at the apex of the Kink (assuming, of course, that there isn't an overtaking car already there).

Turn In: None as such. It is a continuation of the exit arc from Turn 6

Braking Zone: None. This is essentially a straight, so you will be flat on the throttle throughout this section.

Landmarks: The Turn 6A flagger's station is right at the edge of the track, on the right, just before the apex. This station is one of the major blue-flag stations to warn you of overtaking cars. Believe them.



Turn 7

Turn 7 is a very slow, flat, second gear, 190deg hairpin. The pavement surface is very beaten up from years of heavy cars cornering hard, so grip is hard to find. It is also slightly offcamber at the exit due to the crown in the track, so it is just a slow corner. The most common mistake made here is to not brake enough, and then spin at the entrance with trailing throttle oversteer.

Set up: Your exit from the Kink will leave you within 3-6 feet of the left edge of the track. Aim parallel to the centerline of the track, and get the car straight and settled for the braking zone.

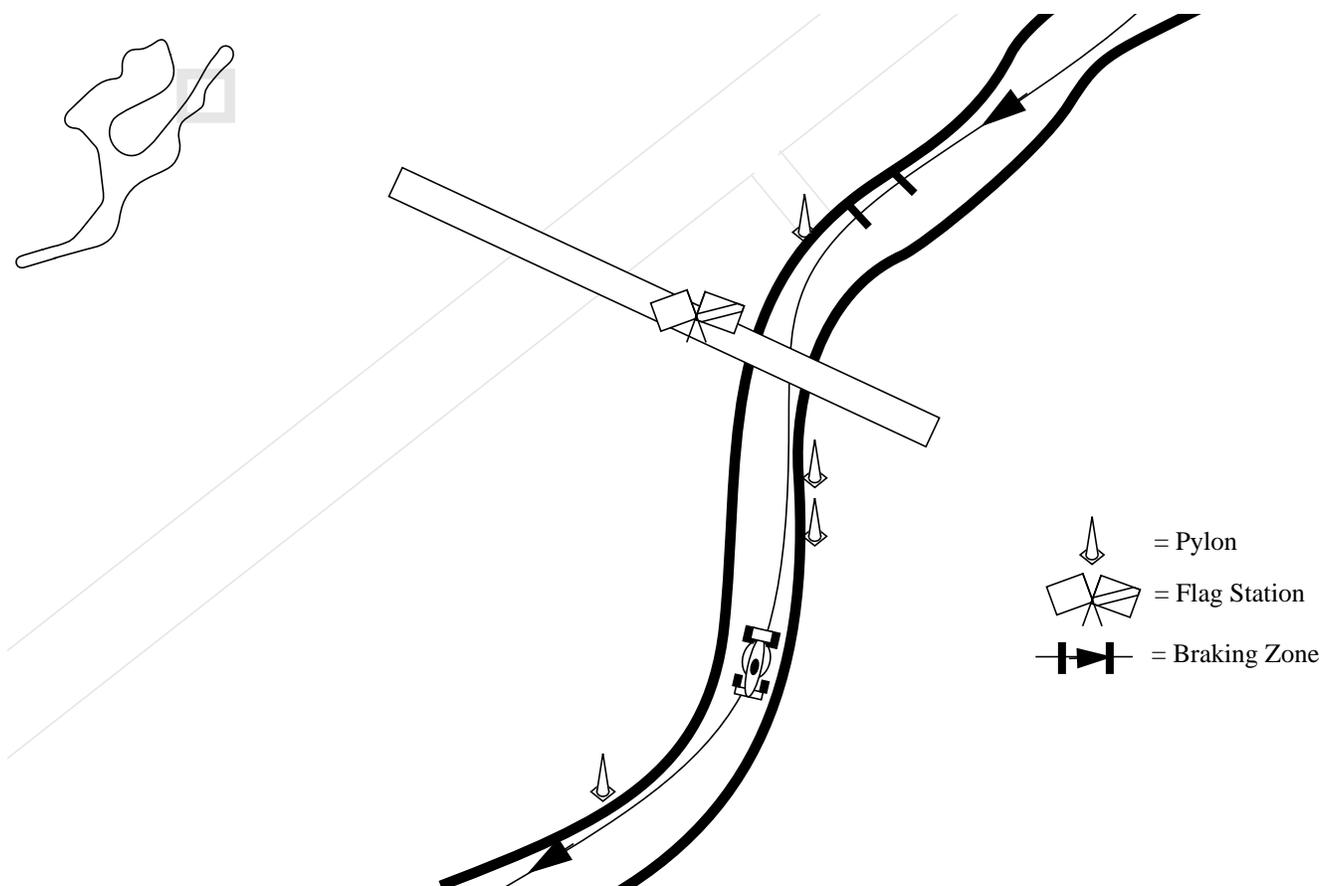
Braking Zone: This is a very hard, straight line braking zone. Downshift 4-2. Transition off the brakes and onto an even throttle before the turn-in.

Turn In: Turn in smoothly but strongly from the very late turn-in point. Aim to hit the painted berm after the drag strip pavement. If you can't get to the apex, you very likely didn't brake enough, or you turned too early. Remember, this is a slow, slow corner, and you can only lose time by carrying too much speed at the entrance. Slow in, fast out.

Apex: The apex is extremely late, just after the drag strip, and will be marked with a pylon.

Exit: The exit of Turn 7 begins the Esses, which are the most important part of the track. From here until Turn 10, we will compromise our exits to set up for the next ess. Unwind the wheel and squeeze on the power, upshifting to third at the exit. Let the car track out smoothly on as wide an arc as possible, but hold that arc to bring the car back across the track to driver's right to set up for the entry into Turn 8. The first little "ess" has no name- it is just a part of the exit of 7. The rest get more serious.

Landmarks: Very few, at the turn in point. It is easy, and common, to turn in too early. At least there is lots of runoff room in the first half of the corner. There isn't, in the last half. You'll aim at the access road driver's right before 8 to set up for it.



Turn 8: the Esses

Turn 8 is the real beginning of the Esses, which are the real crown jewels of Sears Point. The Esses are a series of downhill, increasing radius turns, each much faster than the last. They are very technically demanding, and very exciting to drive. The key to driving the Esses properly lies at the exit of the very first one, right here.

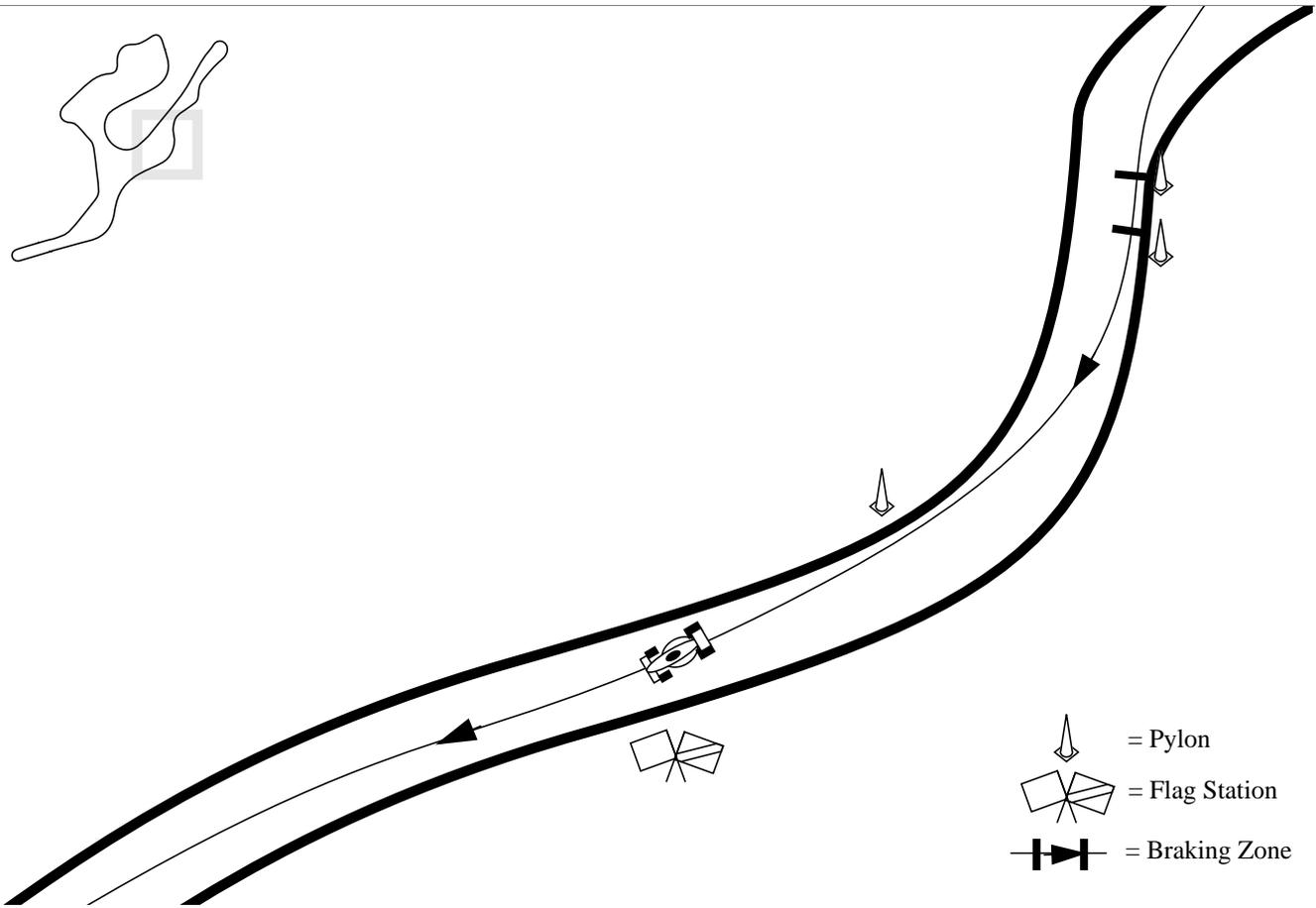
Setup: Bring the car back to driver's right, parallel to the edge of the track, just before the cut road and the bridge. Consider shortshifting up to fourth before the turn-in, to keep from having to mess with the gearbox in the very fast corners ahead. Aim the car right at the turn-in cone, which will be at the tire wall at the end of the cut road, and get the car into a straight line.

Braking Zone: Very short, light, straight line braking, or perhaps just a lift. In competition, this corner is taken flat. Whee!

Turn In: Wind on the steering lock positively, at the very late turn-in point (the end of the access road). Your goal is to bring the car parallel to the driver's left edge of the track between 8 and 8A. This very late turn in is *critical*.

Apex/Exit: The apex is very late, and there is no exit- the steering should be straight ahead (no lock) at the apex. The exit of Turn 8 is completely compromised to set up for the much more critical turn in for Turn 8A. The short, 75 foot long straight line section between the apex of 8 and the turn-in for 8A is critical to let the chassis settle, and control the weight transfer.

Landmarks: The Turn 8 flagger's station is called the Crow's Nest., and is up on top of the bridge. Look up! Turn 8 is critical to laps times, safety, and smoothness. Turning in too early here will leave you hopelessly out of shape all the way down to Turn 10, and crawling along slowly. The importance of keeping the car balanced here *cannot* be overemphasized. There is no runoff area here to speak of, with guardrail on the right and the dirt hillside on the left. Treat this area with a great deal of respect!
From the exit of 8 to the entrance of 8A is the most technically challenging 75 feet of track on the West Coast.



Turn 8A

Turn 8A is a long, increasing radius, high speed, fourth gear, 60 degree right turn. The purpose of 8 was to set you up for 8A. This is a very serious piece of high speed cornering, downhill, slightly off camber, and very fast. And Turn 9 to come is even faster, so we'll compromise this turn to get that one right.

Set up: Stay all the way driver's left after the apex of 8. Allow the car to run straight for just a beat to settle the chassis.

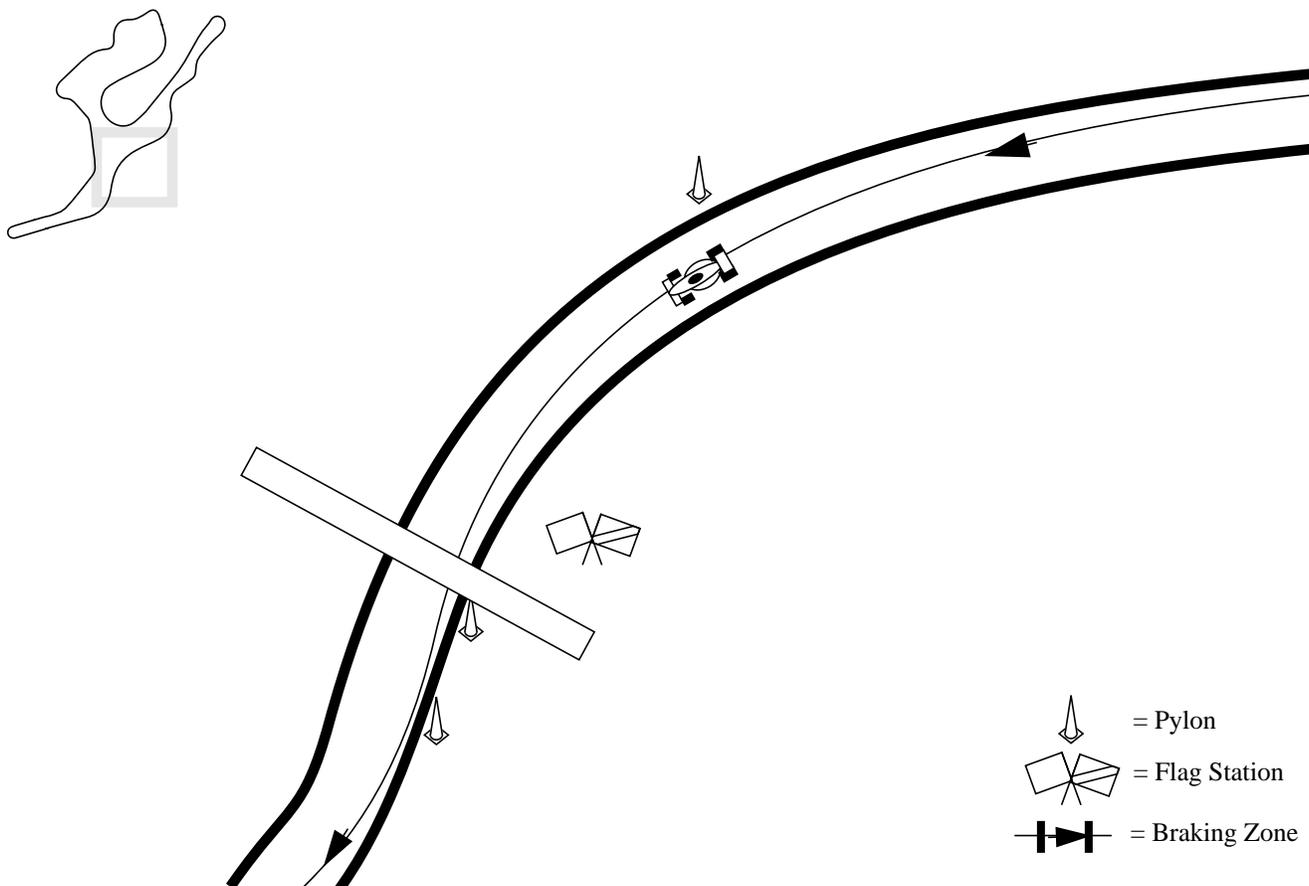
Braking Zone: Very light braking to settle the car in a straight line and aid weight transfer. Some cars can take this with just a lift. In competition, it is taken flat, with just that short bit of straight-line used to settle the car. This is very challenging!

Turn in: Conventional late turn in and late apex, despite the increasing radius. There is little grip just after the turn in. Power will help rotate the car. Don't lift.

Apex: You can and should apply full power from well before the apex of 8A onwards. The hill flattens out at the exit, but too late to be useful for additional grip. Unwind the wheel through this section, and carve a sweeping arc out towards the exit. Don't lift.

Exit: Continue to track smoothly out driver's left, and unwind the wheel, but leave a little lock on. You want to track out only to about 3/4 of the width of the track, leaving a wide safety margin. This will be used to carve the widest possible arc into Turn 9, as we compromise the exit of this turn for the faster turn. The car will feel very light at the exit. Don't lift!

Landmarks: The flagger's station is up the dirt embankment driver's left. The entry to Turn 9 is blind, so check this flag station every lap if you can. And don't lift. This is a very serious corner.



Turn 9

Turn 9 is a very long, sweeping, high speed, fourth gear, 50 degree left turn. It flattens out at the entrance.

Set up: After exiting 8A, you should be in the center of the track. You will want to stay slightly wide driver's right through the first half of the corner, to make the widest possible arc towards the apex. You should leave about a 6 foot safety margin at the turn-in.

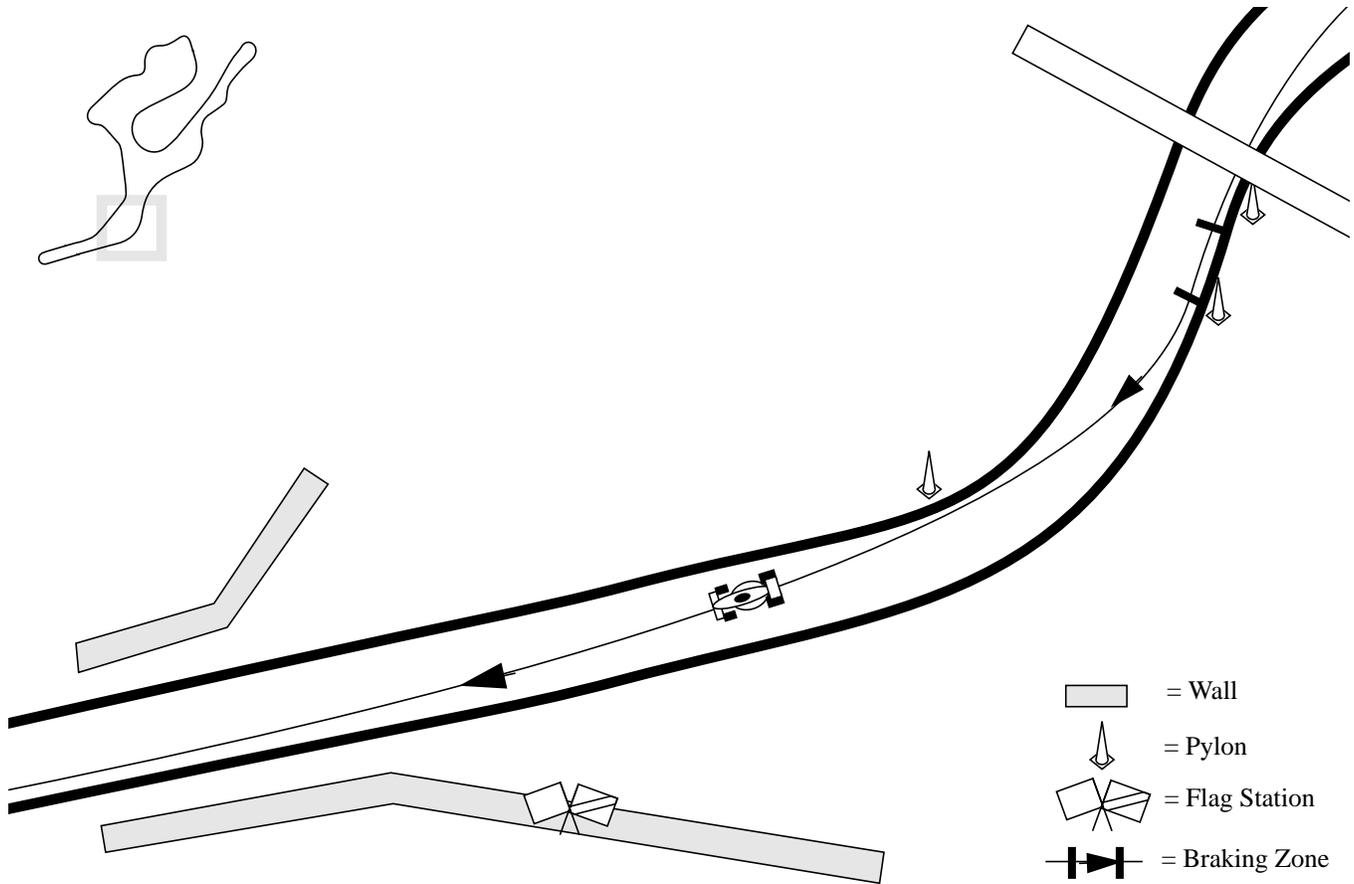
Braking Zone: None. This corner is taken hard on the throttle, and it is very, very fast.

Turn In: The turn-in for Turn 9 is very gradual. The pylon marks the end of the turn in region. The actual turn-in will vary from car to car, as you will be working to manage understeer due to the very high speeds. As you enter the corner, you will be progressively winding on more lock, aiming for the very late apex.

Apex: The apex is very late, and is located at the tirewall protecting the bridge support. This turn varies from non-banked and downhill at the entrance, to flat at the apex. If you can't get to the apex, you'll be in trouble in Turn 10. Don't turn in too early! You'll be at full power and aimed parallel to the driver's left edge of the track right at the apex.

Exit: The exit of Turn 9 is completely compromised to set us up for the entrance to Turn 10. Just as in Turn 8, the short bit of straight-line driving between the exit of 9 and the entrance to 10 is critical, to allow the chassis time to settle. This is one of the very fastest portions of the track

Landmarks: The Turn 9 flagger's station is driver's left by the bridge. There is a sizable amount of runoff, but the speeds are extremely high. Don't lift.



Turn 10

Turn 10 is a difficult, flat, high speed, fourth gear, 75 degree right turn. It is much slower than Turn 9, and the track narrows abruptly.

Set up: Hold the car on the driver's left edge of the track. Straighten out for just a beat to settle the chassis.

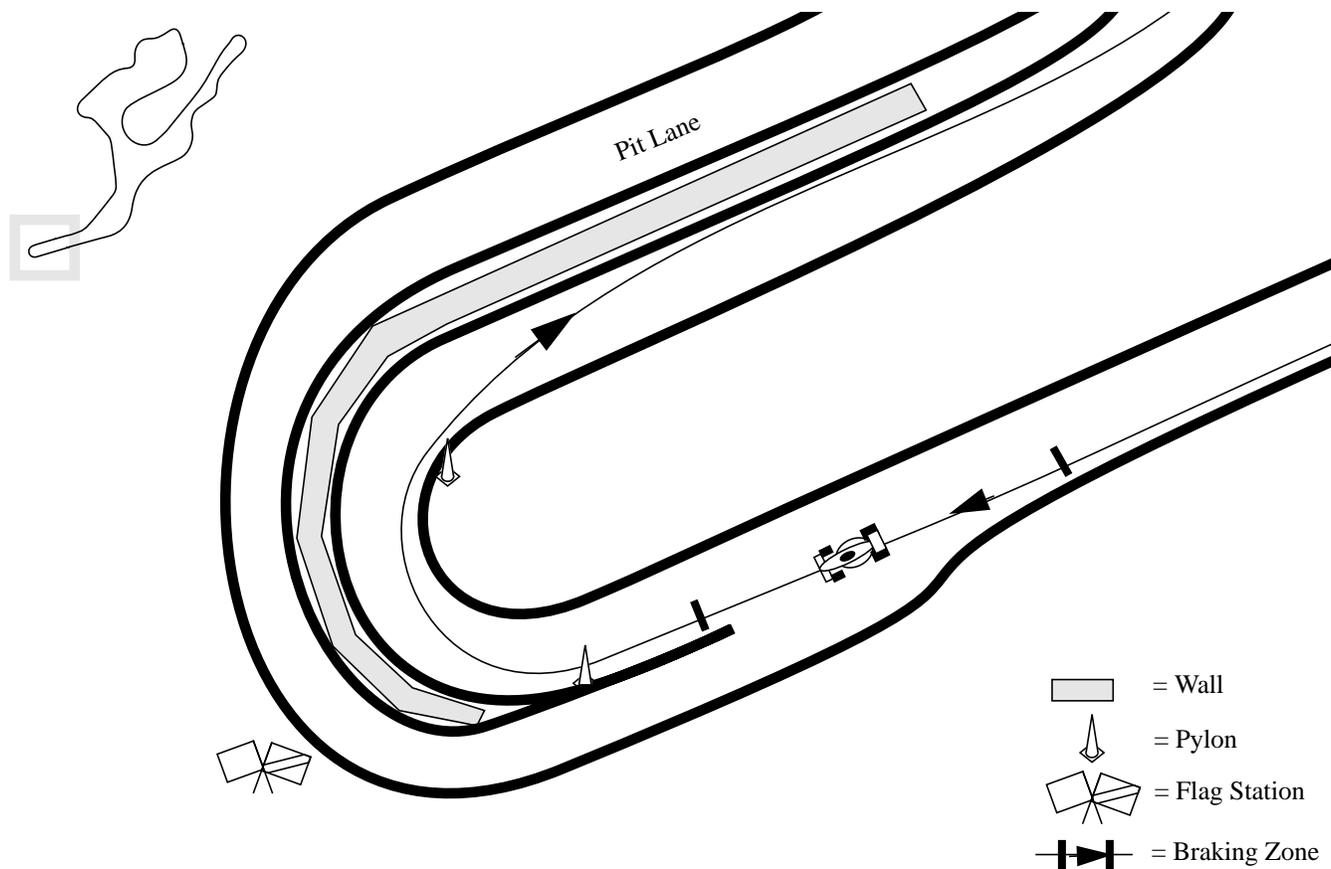
Braking Zone: This is a short but very heavy straight line braking zone. After the braking zone, transition back onto an even throttle for the turn-in.

Turn In: The turn-in for Turn 10 is very positive. Wind on the steering lock and rotate the car to point down at the apex. This corner is very flat, and goes slightly off camber at the exit.

Apex: The apex is late, and it is critical. Missing this apex will lead to a scare at the exit, as the tire wall gets very close to the track out there. You must get to this apex, which means that you must get Turn 9 right to set up for it. Roll on full power at the apex, and unwind the wheel to track out.

Exit: The track goes off-camber and is very bumpy at the exit. To compensate for this, we've taken a late apex, and we'll leave a good 6 foot safety margin to the driver's-left edge of the pavement. Ignore the tire walls that seems to leap out at you.

Landmarks: The Turn 10 flagger's station is well back from the edge of the track, on the tirewall driver's left. There is little runoff area in Turn 10, and the walls are very close indeed. This is a very intimidating turn, and it is easy to make little errors that have big consequences here. This is one to work up to very slowly. Don't lift!



Turn 11

Turn 11 is a hard, very slow, second gear, 180 degree hairpin turn. It is marked out in the dragstrip staging lanes with tires and a painted line on the inside, and with very intimidating walls on the outside. The pit entry peels off driver's left at the entrance.

Set up: After exiting 10, allow the car to track out to the driver's left edge of the track, and aim at the turn-in point.

Braking Zone: This is a very heavy straight-line braking zone. Downshift to second. After the braking zone, transition back onto an even throttle for the turn-in. The most common mistake here is to not brake enough, or far too late. This is a slow corner, and there's no way to make time here. But you can certainly lose a lot of time!

Turn In: The turn-in for Turn 11 is extremely positive. Wind on the steering lock and rotate the car to point down at the apex. This corner will feel as if there is no grip at all. If you can't get to the apex, you didn't brake enough or you turned in too early.

Apex: The apex is late, and just at the end of the painted inner line. This is a good corner to work on your patience in, because you cannot accelerate out of a hairpin until after you have begun to unwind the wheel. The pavement is flat, and very low grip, so excessive throttle will just break the rear end loose. Unwind first, power second. The very late apex allows earlier power.

Exit: Track all the way out, leaving a 3 foot safety margin. The wall is right there, and that is very intimidating for some drivers. However, you must unwind the wheel, and let the car release and begin to track out towards the wall *before* adding power. Track out to the white stripe, and accelerate up through 12 and on up the front straight, which is also a passing zone.

Landmarks: The Turn 11 flagger's station is well back from the edge of the track, straight ahead in the braking zone. At the exit, the walls are very close indeed. Don't let the walls intimidate you into suddenly lifting off the throttle at the exit. Smoothness is the key to this track!