

This document shows the content of Professor Mottola's Driving Mind eCoach



Professor Mottola's
Driving MINDTM eCoach

10 Habits - ZERO Crashes!



The Driving MIND eCoach Mission

This new model provides teenagers with opportunities for **acquiring habits** that cultivate **attitudes** and **strategies** of **Awareness** and **Car Control** for smooth, efficient, economical, responsible, stress-free behavior that **Shares the Road** for a lifetime of **Zero Crashes**.



Most Driving Actions are Performed Automatically Without Thought—by Habits!

Professor Frederik R. Mottola



Learning to pass a licensing exam vs. learning to avoid crashes is as different as the illumination of a lightning bug vs. the illumination of a lightning bolt!

The skills tested on most licensing exams have very little to do with habits that reduce crashes.

For example: to pass a licensing exam drivers must make a complete and legal stop in obedience to a stop sign. But, the major purpose of the stop sign is to safely share the road at intersections with other motorists, with pedestrians, and with bicyclists.

Approaching an intersection prepared to make a staggered stop before the legal stop has more potential for reducing crashes than learning only how to make a complete stop. Teens learn from the Driving Mind eCoach not only how to make a staggered stop, they are coached to develop that action into habit.

Teens would fail a licensing exam if they traveled more than a few miles-per-hour over the posted limit for failure to obey the speed limit sign. The problem is that a speed limit sign only tells drivers how fast they are allowed to travel; **it doesn't tell drivers when they should go slow**. In the Driving Mind eCoach, drivers and “co-drivers” will learn more about speed control than just the posted limit. Drivers will learn how to evaluate a situation ahead as to whether it is a “go” or a “slow” condition and learn about the value of acquiring the habit of “covering the brake” to gain mental readiness and to cut stopping distance in half to avoid crashes.

The question is: which amount of brilliance do you want guiding your teen's habitual performance?

Approaching the vehicle with awareness — *by habit* — or not?

See the targeting path is clear before moving — *by habit* — or not?

Turn head to target area before turning steering wheel — *by habit* — or not?

Speed control before entering a curve — *by habit* — or not?

Detect a skid condition within first second — *by habit* — or not?

Correct an off-target skid within the first second — *by habit* — or not?

Keep 4-seconds separation space from vehicles ahead — *by habit* — or not?

Search beyond the vehicle ahead for slow conditions — *by habit* — or not?

Close in gradually when vehicle ahead slows — *by habit* — or not?

Stop to the rear of vehicle ahead to see tires to ground — *by habit* — or not?

When the car in front is slowing for a turn, increase separation space — *by habit* — or not?

Control the Rear Zone on slow-downs to control the Front Zone — *by habit* — or not?

Use forward position reference point for effective intersection searching — *by habit* — or not?

Use transition pegs for best vehicle balance when cornering — *by habit* — or not?

Use LP1, LP2, LP3 for best lane placement — *by habit* — or not?

Use safety stop position for deep 90° search — *by habit* — or not?

Use staggered stop position on intersection approach — *by habit* — or not?

When a LOS-POT Blockage is detected check opposite window for options — *by habit* — or not?.

Find LOS-POT Blockages in A Zone — *by habit* — or not?

Find LOS-POT Critical Seconds — *by habit* — or not?

Get speed control, lane positioning, communication to control critical second — *by habit* — or not?.

Effectively use Selective Attention Matrix's (SAM) Six Searching Locations — *by habit* — or not?

Use LP1 and reduce speed when there are closed B and C Zones — *by habit* — or not?

Use LP1 with open B and C Zones — *by habit* — or not?

Use LP2 with open B Zone and a closed C Zone — *by habit* — or not?

Use LP3 with open C Zone and a closed B Zone — *by habit* — or not?

At oblique intersections for deep search, position vehicle at 90° angle — *by habit* — or not?.

Use the least amount of space when making left and right turns — *by habit* — or not?

Check the rearview mirror before, during, and after braking — *by habit* — or not?

Evaluate whether rear zone is “open,” “closed,” or “unstable” when braking — *by habit* — or not?

Unstable rear zone, apply brakes as early as possible to stabilize rear zone — *by habit* — or not?

Safety belts clicked-on — *by habit* — or not?

Windows closed — *by habit* — or not?



**The next page is a listing of the
Ten Habits of Zone Control Actions.**

**When these actions are formed into
habits most crashes can be avoided.**



Ten Habits of Zone Control Actions

for Awareness and Car Control

Teens can Earn the Co-Driver License — Before Driver Licensing!

01. Establish Co-Driver Readiness

1. Be mentally and physically fit as a Co-Driver.
2. Know how to detect and correct drowsiness.
3. Evaluate vehicle's surroundings on approach.
4. Control door swing; butt-in seating position.
5. Safety belts on; head restraints up; doors locked.
6. Windows up; driver has headlights on at all times.

02. See Clear Path Before Moving

1. Search to Target Area for clear Path-Of-Travel (POT); identify Line-Of-Sight (LOS) blockages.
2. Turn head, evaluate POT before tires are turned.
3. Use Central vision to search Future Window.
4. Use Fringe vision to monitor Present Window.

03. Keep the Car in Balance

1. Know how to make smooth and effective acceleration and braking actions.
2. Know transition pegs for vehicle balance.
3. Identify and know how to correct off-target skids.
4. Know how to control "Slide Space."

04. Know how to Use Reference Points

1. Know within 3-6 inches where the front, rear and sides of the car is positioned to the roadway.
2. Know where the car's sides and front are in relation to intersection curb lines.
3. Know positions of LP1, LP2, LP3, LP4, and LP5.

05. Use SAM for Zone Control Search

1. Search SAM's (Matrix) A Window to the Target Area for open or closed zones.
2. Evaluate whether condition is a "go" or "slow."
3. FIND LOS-POT (Line-Of-Sight, Path-Of-Travel) blockage critical seconds.
4. Search other zones for additional information.
5. Search other zones for an escape path.

06. Mastering Zone Control Awareness

1. Know how to SOLVE LOS-POT critical seconds.
2. Know actions to take for "Go" or a "Slow" condition.
3. Know the best: speed control, lane positioning, and communication option for situations.
4. Know how to CONTROL the 4-second danger zone.
5. Know how to control the Point-Of-No-Return.
6. Read Cues of Traffic Signs and Pavement Markings.

07. Know how to Control the Danger Square

1. FIND LOS-POT blockage and know how to CONTROL it.
2. When moving; 45-degree search of LOS-POT blockage.
3. When stopped: 90-degree deep search to target area.
4. Know staggered, legal, and safety stop positions.
5. Search for open gap or hole in traffic flow.
6. Check open left, front, right zones before entering danger square.
7. Know how to time arrival into an open zone.
8. When first at green light, look for pedestrians and red light runners.

08. Evaluate Rear-Zone-Control Conditions

1. When the brake is used, check the Co-Driver Rearview Mirror for open, closed, unstable rear zone.
2. Identify tailgater type: charger, one pacer, habitual.
3. When stopped, monitor rear zone until there are "sand barrels."
4. Before car moves to LP4 or LP5, check B or C rear zones.

09. Know how to Control Separation Space

1. FIND stopped or slowing vehicle, close in gradually.
2. When traveling at same speed as vehicles ahead, keep 4-seconds separation space to control the front buffer.
3. When stopped behind a vehicle, see its rear tires touching the road.
4. When the car in front moves, see if it's a "go" situation before your driver moves. Avoid making false starts.

10. Interact Courteously With Others

1. Know how to send and receive communications in a timely and positive manner.
2. Empower yourself, reduce stress by being courteous.
3. Set a daily goal to be courteous to at least one person.
4. Avoid competitive, aggressive, interactions.

All of the **Zone Control Actions** can be acquired into habits to earn the Co-Driver License.



Drivers will acquire these Routines into Habits.

- | | |
|---------------------------|-----------------------------|
| 1. Precision Turns | 2. Danger Squares |
| 3. Roundabouts | 4. Timing Traffic Lights |
| 5. Curves and Hill crests | 6. Precision Lane Changes |
| 7. Nighttime Awareness | 8. Strategies on Freeways |
| 9. Passenger Control | 10. Vision for Skid Control |

Each action is learned, practiced, and mastered into habit!



**The next page is a listing of
Principles and Strategies
that sets the standard for how
actions should be performed.**

Principles and Strategies

for Zone Control Awareness Habits

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General Strategies

1. Search to your target area (A Zone); evaluate its condition; visualize your targeting path; determine the best approach speed and best lane positioning.
2. To best control your Path-Of-Travel (POT), keep the most open space away from the worst problem. (With closed C Zone and open B Zone, take LP2).
3. When a LOS-POT (Line-Of-Sight, Path-Of-Travel) zone change is detected, check the opposite zone for additional information and for an escape path.
4. Use the acceleration, steering and braking controls in such a manner as to achieve a smooth balance of the vehicle.
5. Search to FIND LOS-POT's and CRITICAL SECONDS at least 15 seconds away.
6. When the A zone is closed, adjust speed to arrive into an open zone.
7. SOLVE LOS-POT blockages and Critical Seconds with best speed control, lane positioning, and communication before reaching the 4-second danger zone.
8. Before entering the 4-second danger zone, reevaluate it for best CONTROL.
9. Cover brake at the 2-second PONR (Point of no return).
10. When both the left (B) and right (C) zones are closed, time your arrival to have at least one open side zone. If both are closed, take lane position one (LP1).
11. Any time LP1 is required, reduce speed.
12. Reduce speed as open space to the B, A, or C Zones is decreased.
13. Check the rear zone before, during, and after taking a braking action. Determine if rear zone is Open, Closed, or Unstable. Identify tailgater type. Use best communication technique.

Strategies for Approaching Intersections, Curves and Hill Crests

14. When approaching an intersection, look for open left, front, right zones before entering. When moving, search LOS-POT at 45-degrees. When stopped, search 90° for a Hole or Gap to enter.
15. Search the left, front, right zones of intersections in a sequence from best to worst LOS-POT condition.
16. When approaching a curve, use lane positioning to best separate from traffic and to best see into the curve.
17. Approach a hill crest in LP1. Evaluate the left-front zone and know if LP3 is available as an escape option.
18. When approaching a curve, evaluate speed before reaching the apex. See if a speed reduction is needed to gain best traction control. Use Slide Space on the straightaway.
19. Search through the curve, or over the hill crest, for open or closed POT.

Strategies for Making Turns and Lane Changing

20. Before changing side position, check the outside rearview mirror. If necessary, make a forward head movement view of mirror to check blind area, or check the convex mirror.
21. When making turns and lane changes, use the least amount of space.
22. Before turning the steering wheel, turn your head in that direction to evaluate your POT.
23. Before turning the steering wheel, check your outside rearview mirror.
24. Use central vision to the target area. With fringe vision seeing the transition peg, accelerate.

Separation Space from Vehicles Ahead

25. When there is a vehicle ahead, keep four seconds of separation space.
26. When the vehicle ahead reduces speed, adjust your speed for gradual closure.
27. When stopped, be able to see the rear tires of the vehicle ahead touching the pavement.
28. When the car ahead moves, see its open space to avoid making a false start.



The next page is a listing of Awareness, Space Management, and Car Control Actions that a Co-Driver is able to master before driving.

And, there is a listing of routines the teen will perform when driving takes place.



Zone Control Strategies for Driver Wellness

"Mastered by Co-Drivers."

A. Awareness Actions

- 01 • SAM - Selective Attention Matrix Awareness
- 02 • Future A Zone - Present B and C Zones
- 03 • Find Critical Seconds
- 04 • Go or Slow Condition for Speed Control
- 05 • Six Searching Locations
- 06 • Use of Central and Fringe Vision
- 07 • Search 45° and 90°
- 08 • Gaps and Holes in Traffic Flows
- 09 • Closed Zones
- 10 • Closed Unstable Zones
- 11 • Reading Others' Actions
- 12 • Communication Cues
- 13 • Traffic Signs and Markings as Action Cues
- 14 • Rear Zone Open, Closed, Unstable
- 15 • Nighttime Driving Conditions

B. Space Management Actions

- 01 • Courtesy — a Gift to Yourself
- 02 • Control of Separation Space
- 03 • Solve and Control of Critical Seconds
- 04 • Managing LOS-POT Blockages
- 05 • Reference Points for Vehicle Placement
- 06 • Lane Positions LP1, 2, 3, 4, 5
- 07 • Control of 4-Second Danger Zone
- 08 • Control of 2-Second PONR
- 09 • Timing Traffic Lights for Open Zones
- 10 • Control Rear Zone

C. Car Control Actions

- 01 • Mental and Physical Fitness
- 02 • How to Detect and Correct Drowsiness
- 03 * Lane Placement
- 04 • Deliberate Practice for Habit Development
- 05 • Speed Control
- 06 • Value of Safety Belts
- 07 • On-Off-Target Skid Control
- 08 • Smooth Motion Control
- 09 • Transition Pegs for Vehicle Balance
- 10 • Control of Pitch, Roll, Yaw Axes

Guides for Driving Routines

"To be Mastered during the Driving Phase."

- G01. Entering and Exiting the Vehicle
- G03. Starting Vehicle in Motion and Stopping
- G04. On-Target, Off-Target Vision Control
- G05. Reference Point Discoveries
- G6A. Entering and Crossing Traffic Flows
- G6B. Precision Turns
- G10. Managing LOS-POT Blockages on Straightaways
- G11. Turnabouts
- G17. Approaching and Entering Danger Squares
- G18. Use of Mirrors and Cameras
- G19. Stopping in Traffic
- G20. Traffic Light Timing, Left Turns at Green Light
- G21. Entering and Exiting Roundabouts
- G22. Precision Lane Changes
- G23. Parking and "Unparking"
- G25. Approaching and Exiting Curves and Hills
- G28. Timing Side Zones
- G32. Passing and Being Passed
- G33. Responding to Problems
- G34. Entering and Exiting Freeways

NOTE: These 20 Routines require performance of 315 Actions.

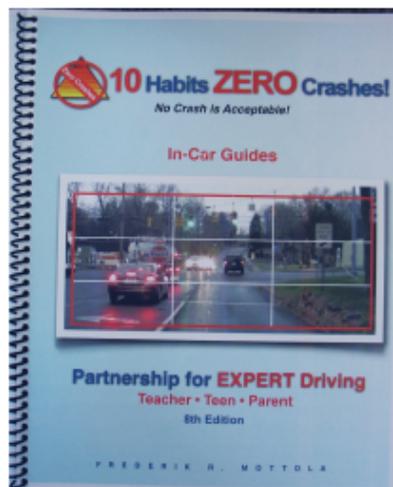
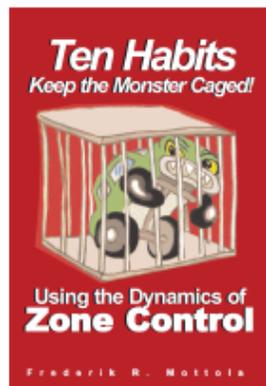
**Strategies for driving are like those in chess
— it's not knowing how to make a move —
it's knowing *when* to make the move!**



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The next 13 pages is a listing of Zone Control Strategies for performing procedures, which are based on these two books.



There are 230 actions that a teen can learn before becoming licensed!



Professor Mottola's

Driving MINDTM eCoach
Share the Road

Zone Control Strategies for Driver Wellness

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Unit One: Power Tools to Build a House of Habits Strategies 1 & 2

Strategies 1: Guide 01 - H01*. Establish Driver-Vehicle Readiness

- S1.01 Be physically and mentally fit to drive.
- S1.02 Have clean headlights and clean windshield for best sun glare and nighttime visibility.
- S1.03 No drowsiness, no alcohol, no drugs, no anger, no distractions.
- S1.04 Know how to detect and correct a drowsy condition.
- S1.05 Approach a vehicle with awareness of surroundings.
- S1.06 Look into vehicle. Control the door swing when opening.
- S1.07 Butt-in seating. Seat adjustments. Head restraints to ear level.
- S1.08 Windows up. Doors locked. Headlights on at all times.
- S1.09 Inside Mirrors get maximum view. Outside mirrors be able to see vehicle to the rear.
- S1.10 Use safety belts and require passengers to do so.
- S1.11 While passengers enter and exit an idling vehicle, use "Park" position and foot on brake.
- S1.12 How to give drivers positive feedback for correct actions.
- S1.13 How to handle situations if you suspect the driver may be drunk.

Set 2: Guide 04 - H02. See Path Before Putting the Car in Motion

- S2.01 See that the Targeting Path you intend to use is clear.
- S2.02 Turn head in direction of intended movement before turning steering wheel.
- S2.03 Search SAM A window to target area for "Go" or "Slow" Conditions.
- S2.04 When central vision is directed away from roadway, establish open POT first.
- S2.05 Detect an off-target skid condition within the first second.
- S2.06 Correct an off-target skid condition within the first second.
- S2.07 Effectively use Central, and Fringe vision for searching and monitoring.
- S2.08 Find LOS-POT Blockages in C and B Zones.

*Guides are from: *Partnership for Expert Driving*, 8th edition

*H = Habits from: *Ten Habits Using the Dynamics of Zone Control*, 2nd edition



Unit One • Strategies 3 & 4

Strategies for driver wellness to develop into habits!

Strategies 3: Guide 28B - H09. Get Control with a Vehicle in Front

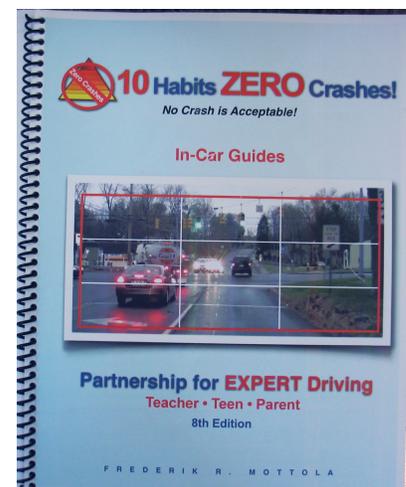
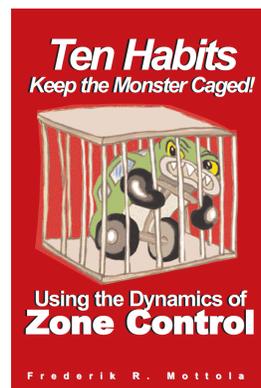
- S3.01 Be able to judge seconds of separation space.
- S3.02 Keep 4-seconds separation space when traveling at same speed as vehicle ahead.
- S3.03 Search beyond the vehicle ahead for slow conditions that may develop.
- S3.04 Close in gradually when vehicles ahead slow.
- S3.05 Stop to rear to see tires of car ahead.
- S3.06 When stopped traffic ahead begins to move, evaluate their POT before moving.
- S3.07 When the car in front is making a turn, increase separation to avoid zigzagging.
- S3.08 Control the rear zone to manage the front zone.

Strategies 4: Guide 05 - H04. Use Reference Points

- S4.01 Use Fringe Vision to maintain vehicles lane placement.
- S4.02 Learn use of reference points from the co-driver seat.
- S4.03 Learn side position reference points for making left or right turns.
- S4.04 Learn forward position reference points for making left or right turns.
- S4.05 Learn Transition peg from passenger seat for left and right turns.
- S4.06 Learn reference points for Lane positions LP1, LP2, LP3.
- S4.07 Move Chip car into Lane Position One.
- S4.08 Move Chip car into Lane Position Two.
- S4.09 Move Chip car into Lane Position Three.
- S4.10 Learn Legal stop position at stop signs.
- S4.11 Learn Safety Stop reference point.
- S4.12 Learn Staggered Stop Position.

Reference:

- *Partnership for Expert Driving*, 8th edition
- *Ten Habits Using the Dynamics of Zone Control*, 2nd edition





Unit One • Strategies 5

Strategies for driver wellness to develop into habits!

Strategies 5: Guides 10, 13, 14, 28 - H05. Zone Control of LOS-POT Critical Seconds

- S5.01 When a LOS-POT blockage is detected check opposite Window for options.
- S5.02 When a LOS-POT blockage is detected check opposite Window for an alternate POT.
- S5.03 Find LOS-POT blockages in future (A) window (target area) of Selective Attention Matrix (SAM).
- S5.04 Find Critical Seconds and establish control of the 4-second danger zone before entering it.
- S5.05 Find LOS-POT Critical Second
- S5.06 Solve 15 seconds away
- S5.07 Control 4 second Danger Zone
- S5.08 Control A, B, C Windows
- S5.09 Control Critical Second
- S5.10 How to deal with a driver who mismanages critical seconds.
- S5.11 How to handle a driver traveling at excessive speed.
- S5.12 Learn and use Six Searching Locations of the Selective Attention Matrix (SAM).
- S5.13 Establish best Lane Position, Speed Control, and Communications for B and C Zone conditions.
- S5.14 Solve LOS-POT blockages with best speed control, lane positioning, and communication.
- S5.15 When vehicle ahead is waiting to turn left, search for its opening to complete the turn.
- S5.16 When you have five or more second of space, the left turner will make the turn in front of you.
- S5.17 While operating within a path of travel, keep open space away from worst problem.
- S5.18 Use traffic signs as cues for where to search and what to search for.
- S5.19 Use LP1 and reduce speed when there are closed B and C zones.
- S5.20 Use Lane Position One (LP1) with open or closed B and C zones.
- S5.21 Use Lane Position Two (LP2) with open B zone and a closed C zone.
- S5.22 Use Lane Position Three (LP3) with open C zone and a closed B zone.

Quizzes and Tests:

Reference: *Partnership for Expert Driving*, 8th edition



Unit One • Strategies 6

Strategies for driver wellness to develop into habits!

Strategies 6: Guide 16 - H10. Interact Courteously with Others

- S6.01 When oncoming vehicle moves into LP2 expect it may drift into your lane.
- S6.02 When vehicle ahead moves into LP2 expect it to turn left.
- S6.03 When vehicle ahead moves into LP3 expect it to turn right.
- S6.04 Know when not to signal; such as when you don't want an approaching car to reduce speed.
- S6.05 When an oncoming vehicle is waiting to turn in front of you, evaluate your rear zone.
- S6.06 Empower yourself and reduce stress by seeking opportunities to be courteous to others.
- S6.07 Set a goal to be courteous to at least one person each day.
- S6.08 Send and receive communications in a timely and positive manner.
- S6.09 Avoid waving others to "go" unless you have total and accurate information of all conditions.
- S6.10 When oncoming driver is attempting to make a left turn with traffic to your rear, open your gap.
- S6.11 When oncoming driver is attempting to make a left turn with no traffic to your rear, keep speed.
- S6.12 Open up separation space to invite others to enter the traffic flow.
- S6.13 Open up separation space to 5 or more seconds for an oncoming vehicle to turn left in front of you.



Unit Two: **Building the House of Habits** **Strategies 7 & 8**

Strategies for driver wellness to develop into habits!

Strategies 7: Guides 5, 6A, 6B - H07. Control the Danger Square - Making Turns

- S7.01 Use 90° deep-search from stopped position.
- S7.02 Search Left, Front, Right for gap or hole to enter.
- S7.03 Turn head to evaluate POT before steering wheel is turned.
- S7.04 Learn side position reference points for making left or right turns.
- S7.05 Learn forward position reference points for making left or right turns.
- S7.06 Learn reference points for Lane positions LP1, LP2, LP3.
- S7.07 At oblique intersections for deep search, position vehicle at 90° angle to intersection.
- S7.08 Use the least amount of space when making right and left turns.
- S7.09 Use signal lights at least 5 seconds before turns.

Strategies 8: Guide 18 - H08. Get Rear Zone Control

- S8.01 Check rearview mirror before, during, and after taking a braking action. (Use Co-driver mirror.)
- S8.02 Evaluate whether the rear zone is “open,” “closed,” or “unstable.”
- S8.03 With closed rear zone, evaluate tailgater type: charger, one pacer, habitual.
- S8.04 With unstable rear zone tap the brake lights early before a complete stop. (to inform driver of issue)
- S8.05 With unstable rear zone apply brake as early as possible to stabilize rear zone.
- S8.06 When stopped in a traffic flow, continually monitor rear cars until at least two appear (“sand barrels”).

Quizzes and Test



Unit Two • Strategies 9

Strategies for driver wellness to develop into habits!

Strategies 9: Guides 17, 19, 20 - H07. Control the Critical Seconds at Danger Squares

- S9.01 While approaching danger square, search to the front, and at a 45-degree to the left and right.
- S9.02 Use a staggered stop position when the first car on inside lane of red light or stop sign.
- S9.03 Use a staggered stop position as an implied yield sign if conditions warrant its use.
- S9.04 Use a safety stop to have best searching of 90° to the left and right target areas.
- S9.05 While stopped, search to the front and at a 90-degree to the left and right.
- S9.06 Search for a hole or gap in the traffic flow.
- S9.07 Search the intersections left, front, and right zones from best to worst LOS-POT blockage.
- S9.08 Evaluate whether you are in a “Go” or a “Slow” Condition — take appropriate action.
- S9.09 With a red traffic light (a “Slow” condition) avoid continuation of unnecessary acceleration.
- S9.10 Time red traffic lights to become green while still five-seconds away.
- S9.12 Establish control of the 4-second danger zone (B and C Zones) before entering it.
- S9.13 Control 2-second point-of-no-return (PONR) before entering intersection.
- S9.14 Know where the PONR is for a green light changing to yellow.
- S9.15 Learn how to read accumulation of traffic at traffic actuated lights.
- S9.16 When the light turns green it will take one-second per vehicle before the vehicle ahead moves.
- S9.17 When you’re the first vehicle at a fresh green light, search 90°-left, front, 90°-right for red-light runners.
- S9.18 Four searches when stopped at green light to make left turn, evaluate: gap, path, light and rear.

A test, based on Strategies 1 to 9, can be taken at this stage to earn the Zone Control Co-Driver License.





Unit Two • Strategies 10

Strategies for driver wellness to develop into habits!

Strategies 10: Guide 22 - H06. Build Zone Control Actions into Habits- Precision Lane Changes

- S10.01 Evaluate benefit for making the lane change.
- S10.02 Search other lane's LOS-POT.
- S10.03 Search outside mirror to find the gap or hole to enter.
- S10.04 Use LP2 then LP3 for making a precision lane change to the left.
- S10.05 Use LP3 then LP2 for making a precision lane change to the right.
- S10.06 Use LP4 or LP5 to control a lane merge.
- S10.07 Use LP5 to prevent a dangerous-overtaking-charger from driving into a bicyclist or jogger.
- S10.08 When last car before the gap is passing you, hold signal lever in lane change position.
- S10.09 Move into LP2 for left lane change, LP3 for right lane change.
- S10.10 Move head 8 inches forward while viewing mirror to check blind area.
(As Co-Driver, ask driver to adjust passenger-side mirror for your use. See more info when head is moved forward.)
- S10.11 Time arrival into new lane with open B and C zones when possible.
- S10.12 Increase speed if necessary.
- S10.13 Move into LP2 or LP3 of new lane.
- S10.14 Release signal lever.
- S10.15 Check rear zone for update.
- S10.16 Decide on best LP for upcoming conditions.

Quizzes and Tests:



Unit Three: **Living in the House of Habits** **Strategies 11**

Strategies for driver wellness to develop into habits!

Strategies 11: Guide 25 - H06. Turn Decisions into ZC Actions - Approaching Curves and Hills

S11.01 See curve in Target Area (SAM'S Future A Window).

S11.02 On approach to curve, check rear A zone condition.

S11.03 Get speed under control while on the straightaway.

S11.04 See at least 4-seconds of roadway into curve as measurement of speed control.

S11.05 Before entering a curve with reduced traction road conditions apply brake to test traction.

S11.06 During reduced traction conditions use "slide-space" on straightaway.

S11.07 Search into a curve to see condition of new path of travel.

S11.08 For Hills: use 100% focus to search over hill crest to see condition of new path of travel.

S11.09 Take Lane Position 2 on approach to right curve with an open B zone.

S11.10 Take Lane Position 3 on approach to left curve with an open C zone.

S11.11 Take Lane Position 1 at apex and while exiting left and right curves.

S11.12 On sharp curves, hold partial brake until at the transition peg.

Quizzes and Tests:



Unit Three • Strategies 12

Strategies for driver wellness to develop into habits!

Strategies 12: Guides 32A, 32B - H01-H10.

Being Passed

- S12.01 Identify tailgater type.
- S12.02 Habitual tailgater will not pass; concentrate on A Front Zone Conditions.
- S12.03 Charger tailgater will make an aggressive passing maneuver.
- S12.04 Evaluate Future and Present SAM Windows for where to be passed.
- S12.05 Select the best location for you to be passed.
- S12.06 Move into an LP that communicates to rear-driver to pass you.
- S12.07 Communicate with signal light if needed.
- S12.08 Reducing your speed will give you less exposure to the critical second

Passing on Secondary Roadways

- S12.09 Evaluate risk versus gain.
- S12.10 Evaluate traffic conditions of your POT to the target area.
- S12.11 Evaluate rear zone conditions to detect a vehicle to the rear that may also be passing.
- S12.12 Evaluate Future and Present SAM Windows.
- S12.13 Search for LOS-POT Blockages that may prevent detection of vehicles entering your POT.
- S12.14 Evaluate and be aware of rear zone conditions.
- S12.15 Keep at least 3 seconds separation while waiting for a passing opportunity.
- S12.16 Continue to evaluate Future and Present Windows of SAM during pass.
- S12.17 Return to lane when one headlight of passed vehicle appears in the inside rearview mirror

Passing on Freeways

- S12.18 Use number 1 lane for passing. When pass is complete move into another lane.
- S12.19 Use timing, lane selection, and lane position to separate from traffic at merge areas
- S12.20 Treat each vehicle passed as a “critical second.”
- S12.21 Evaluate the vehicle’s lane position and how steady its placement has been.
- S12.22 Evaluate what the gain will be by passing.
- S12.23 Avoid passing when there are closed B and C zones.
- S12.24 Avoid passing at merge areas.
- S12.25 When passing large vehicles (LOS Blockages) make 45° search for other passing vehicles.



Unit Three • Strategies 13

Strategies for driver wellness to develop into habits!

Strategies 13: Guide 34 - H01 - H10.

Freeway Driving

S13.01 Check the Rear A Zone condition.

S13.02 Keep 4-seconds separation from vehicle ahead.

S13.03 While on ramp, evaluate length of acceleration lane.

S13.04 While on ramp, evaluate Rear B or C Zones to find Gap or Hole in traffic flow.

(Co-driver may need to look out back window.)

S13.05 Travel at legal speed limit in furthest right-side lane.

S13.06 Middle lane is best to travel at the common-speed of the traffic flow unless it is more than 10 mph over the speed limit.

S13.07 The middle lane is the fast lane for trucks that are restricted from the left lane. They may tailgate.

S13.08 Select best legal lane for travel based on traffic flow.

S13.09 Evaluate LOS-POT condition of B and C Present Zones of SAM (Left and Right Zones).

S13.10 Use left lanes (lane #1) on freeways only for passing (aggressive drivers will “push” you).

Getting On the Freeway

S13.11 Note the length of the acceleration lane for best planning.

S13.12 Know whether a blind area search is needed.

S13.13 If blind search is needed, move head 8-10 inches forward while checking outside mirror.

S13.14 Keep awareness of aggressive driver in your Rear B Zone.

S13.15 With Gap or Hole located, accelerate to blend into traffic at the speed of the traffic flow.

S13.16 Enter into LP3 for right-side entrances, which provides escape path for aggressive drivers.

S13.17 Enter into LP2 for left-side entrances, which provides escape path for aggressive drivers.

S13.18 Check A Rear Zone and A Front Zone for updates.

Exiting Freeway

S13.19 Plan for exiting information in the A Zone.

S13.20 Get Rear Zone status, Communicate, Lane Change if necessary.

S13.21 Test road surface during adverse conditions by applying brake while in decelerate lane.

Quizzes and Tests



Unit Three • Strategies 14

Strategies for driver wellness to develop into habits!

Note: Sections of this Set is spread out from sets 5 to 13 in the e-Coach.

Strategies 14: Guide 36 - H01 - H10. Keep Car in Balance - Skid Prevention and Car Control

- S14.01 Adverse conditions affect visibility or traction or both.
- S14.02 Dirty windshield creates reduced visibility and increases the blindness caused by sun glare.
- S14.03 Headlights with dirty lens reduces nighttime visibility.
- S14.04 Weather conditions created by fog, rain, snow, ice, sand and dust storms.
- S14.05 In all situations with reduced visibility speed reduction provides more time to process information.
- S14.06 Reduced traction results when there is less tire in contact with the road surface.
- S14.07 Wet roadways caused by dew, rain, snow, and ice require reduced speed.
- S14.08 During heavy rain deep tire treads are required to penetrate the water to make road contact.
- S14.09 Worn tires perform well on dry roads, which provides drivers with false feedback.
- S14.10 Worn tires, speed, heavy rain, causes front tires to ride on the water (hydroplaning) reducing steering.
- S14.11 Weight from backseat passengers can cause the front tires to lose contact with the road.

Three Stages of Skids

- S14.12 There are three stages: Prevention, Detection, Correction.
- S14.13 To best control a skid is to Prevent loss of tire grip to the road.
- S14.14 Control of the tire grip is dependent upon four tire patches, each about the size of your hand.
- S14.15 When tire grip is lost to the front tires, steering is lost and the car will slide straight ahead.
- S14.16 When tire grip is lost to the rear tires, the back end creates an Off-Target condition.
- S14.17 The loss of tire grip is most likely to happen by excessive speed, by braking, and steering.
- S14.18 Prevention is easier than correction. Reduce speed before entering corners.
- S14.19 Avoid harsh braking and steering actions.
- S14.20 Detection of the loss of traction to rear tires, is made by practicing on-off target awareness.
- S14.21 Correction of all skids requires foot off the brake and steer to get the car back on target.
- S14.22 Secondary Skids occur when the yaw rotation is stopped and the car goes into an off-target slide.
- S14.23 During the slide, the car is pointing away from the target area; the tires fully turned toward target area.
- S14.24 When speed of slide is reduced, traction is regained, a very rapid movement toward the target occurs.
- S14.25 Three actions must take place for correction: head to target area, detect car's movement, steer rapidly.

Quizzes and Tests:



Unit Three • Strategies 15

Strategies for driver wellness to develop into habits!

Strategies 15: Guides 11A, 16, 23, 30 - H01 - H10. Backing - Parking

S15.01 Backing requires use of all three mirrors. With back-up camera equipped vehicle, use both outside mirrors and the back up camera.

S15.02 Most essential to backing is speed should be at a creeping pace. When close to other objects, speed is at an inching pace.

S15.03 To aim the vehicle, select a targeting point and turn the steering wheel from the top down in the direction you want to go.

S15.04 Check front swing of vehicle when there is a steering action.

S15.05 Discover the “pivot point” for precision turning while backing.

S15.06 For Forward and Angle Parking view the In-car Guides for the Chip Cars that are available for step-by-step mental guidance.

S15.07 It is safer and more efficient to back into a Perpendicular Parking space than to back out..

S15.08 For Perpendicular Parking view the In-car Guides for the Chip Cars that are available for step-by-step mental guidance.

S15.09 For Parallel Parking view the In-car Guides for the Chip Cars that are available for step-by-step mental guidance.

S15.10 With practice using the Chip Cars for mental preparation you will have 100 percent success the first attempts when actual backing.

S15.11 Backing into space takes less time to park and “unpark.” Can get into and out of tighter spaces. Reduced liability if a crash occurs.

S15.12 Use inside and outside mirrors in combination with backup camera when backing and parking.

Quizzes and Tests:



Unit Three • Strategies 16

Strategies for driver wellness to develop into habits!

Strategies 16: Guide 31 - H01 - H10. Nighttime Driving

S16.01 Clean lights, windows, mirrors.

S16.02 Keep instrument panel lights low.

S16.03 Avoid looking at glaring oncoming lights with central vision, monitor vehicle with your fringe vision.

S16.04 Evaluate your depth perception accuracy by estimating the distance of oncoming vehicles, then count off the seconds.

S16.05 Be aware of the moon's cycle. The difference between illumination from a "full moon" as compared to a "new moon" is significant.

S16.06 Rural roadways without street lights require more concentration to search the A Zone beyond the range of your headlights.

S16.07 On rural roadways use high beams whenever there are no vehicle ahead of you, and there are no oncoming vehicles; with an oncoming car, dim high beams immediately.

S16.08 In urban areas avoid distractions created by an overload of environmental lights.

S16.09 Look for locations where pedestrians and bicyclist may be entering your POT.

S16.09 Look for cars without headlights on; most often they may come out of an illuminated parking lot.

S16.10 Communicate to oncoming vehicle with no headlights or with high beams on by one flash of your headlights from a distance.

S16.11 See curves and intersections early.

S16.12 When driving along side other vehicles, especially trucks, do not use or flash high beams.



230 Strategies can be cultivated into habit for Zero Crashes!





This last page is a listing of language used by the Driving MIND eCoach for making turns.



Zone Control Language for Making Turns

Learn, Practice, Master, Mental Skills to Control Critical Seconds

Professor Frederik R. Mottola • Fred@NIDB.org

There is not a single one of these actions that cannot be mastered into habit by a teenager before licensing!

Language While Making Turns to Control Critical Second

Target	Judge distance in seconds
Target Area	Search Left, Front, Right Zones
Path Of Travel	For Hole
Central Vision usage	For Gap
Fringe Vision usage	90 degree while stopped
On Target condition	45 degree while moving
Off Target condition	Selection of Hole or Gap
Transition Peg: Driver, Co-Driver	Turn head before turning tires
Left turn	Evaluate POT to Target Area
Right turn	Selective Attention Matrix
Skid Recovery	A, B, C Windows
Go Condition	Control your Buffer
Slow Condition	Moving turns
Cover Brake	- hold brake to Tpeg
Smooth Stop	Turns from Stop position
Side Position - left turn	- accelerate at Tpeg
Side Position - right turn	Staggered Stop Position
Left side limitation	Legal Stop Position
Right side limitation	Safety Stop Position
Forward Position from a stop	LP1, LP2, LP3, LP4, LP5
Right turn	LOS-POT Blockage Critical Second
Left turn	Find LOS-POT Blockage
Large radius right turn	Solve LOS-POT Blockage
Oblique left or right turn	Control LOS-POT Critical Second
Exiting Lane Position	Open Zone
Forward Position while moving	Closed Zone
Right turn	Zone Change
Left turn	4-second Danger Zone
Large radius right turn	2-second PONR
Oblique left or right turn	Use best Communication
Exiting Lane Position	Find Opportunity to be Courteous
Rear Zone Control	
Open, Closed, Unstable	
Charger, One Pacer, Habitual	

Bottom line, all drivers need Habits of
Awareness to Control Critical Seconds!