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Run-Off-Road Collision Avoidance Countermeasures Using IVHS Countermeasures

TASK 1

Volume 2: Support Volume



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Contracting Officer's Technical Representative's Precip

This report provides a basis for disseminating the preliminary contract results on a timely basis resulting in the information being available before the contract final reports are produced. Research performed during the remainder of the contract may support and/or modify the results, therefore, the material contained in this report should not be consider to be final. The current schedule calls for the completion of this research project by the third quarter of 1999.

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16 Abstract The Run-Off-Road Collision Avoidance Using IVHS Countermeasures program is to address the single vehicle crash problem through application of technology to prevent and/or reduce the severity of these crashes. This report contains a summary of data used in the clinical analysis conducted in Task 1. The data was extracted from the NASS CDS cases selected for analysis. All NASS cases were selected from the 1993 NASS CDS data file. Each case is described by a data summary sheet, which contains descriptive data on the crash, a narrative of what occurred in the crash, a scene diagram illustrating the crash site with the vehicle's trajectory, and a situation tree summarizing the crash sequence.					
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INTRODUCTION

This volume contains a summary of data used in the clinical analysis conducted for the Run-Off-Road Collision Avoidance program. The data was extracted from the NASS CDS cases selected for the analysis. All NASS cases were selected from the 1993 NASS CDS data file.

Each case is described by a data summary sheet, which contains descriptive data on the crash, a narrative of what occurred in the crash, a scene diagram illustrating the crash site with the vehicle crash sequence, and a situation tree demonstrating the crash scenario. The descriptive data listed in each case is drawn from the NASS CDS hard copy case report. The narrative for each case was prepared by Calspan analysts. It is a result of the careful consideration by the analyst and takes into account police reports, witness statements (when available) as well as photographs of the scene. The scene diagram is included to allow a better visualization of the crash scene. This diagram goes beyond the scene diagram in the NASS case including details that are apparent to the analyst from photographs of the crash scene.

This volume was assembled to act as a reference for later tasks in this program. Additional detailed questions about the crashes that arise upon selection of a countermeasure technology may be addressed by the data contained in this volume.

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CAUSAL FACTOR: Evasive Maneuver - Vehicle Encroaching into Lane - Opposite Travel Direction

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	1-6-93	Weather	Clear/Cloudy
Time:	1000	Surface Condition:	Dry
Accident Type:	Avoid Collision	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	16	Year:	1987
Driver Sex:	Male	Vehicle Make:	Chrysler
Impairment:	None	Vehicle Model:	LeBaron
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	06 Steering left		
G V64:	05 Passing or overtaking another vehicle		
GV65:	53 Other motor vehicle in lane traveling in opposite direction		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Opposite Travel Direction*

ROADSIDE DEPARTURE: *Left*

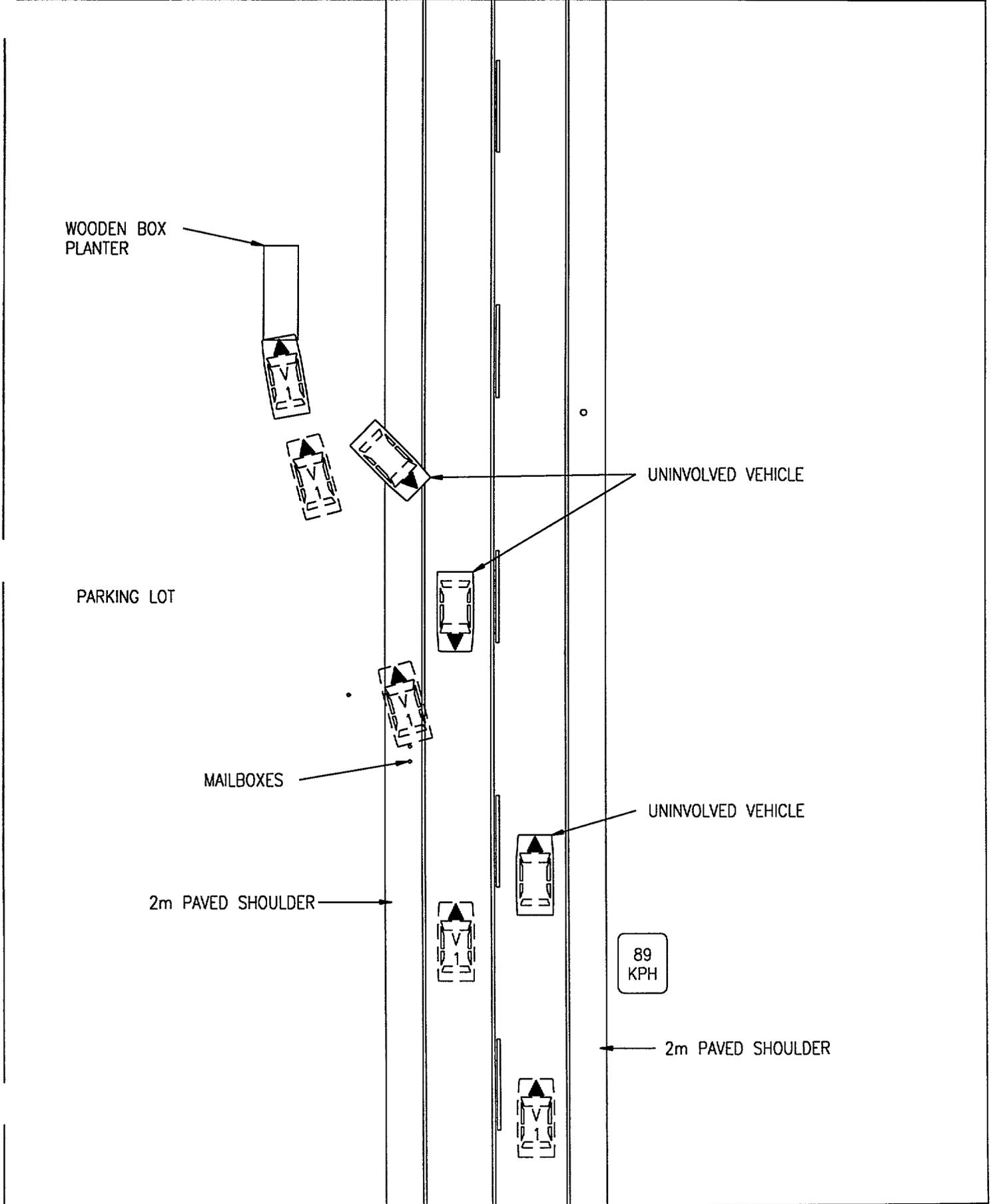
The subject vehicle was traveling in a westerly direction on a dry, straight, level, two-lane, rural, asphalt roadway during daylight hours in an 89 km/h (55 mph) speed zone. The subject vehicle was following a non-contact vehicle in the westbound lane and initiated a passing maneuver into the eastbound lane. A second non-contact vehicle exited a parking lot at the south road edge and initiated a left turn into the eastbound travel lane. The subject driver steered left to avoid the left turning vehicle and departed the left road edge. The vehicle traversed the parking lot and impacted several mailboxes and a retaining wall. The road surface was marked with white edge lines and yellow center lines which permitted passing in the westbound direction. All lines were in poor condition. The right (north) shoulder was covered with a frozen snow bank while the left (south) shoulder was plowed, paved, and approximately 2 m wide. There were no roadside reflective markers or delineators.

ACCIDENT COLLISION DIAGRAM

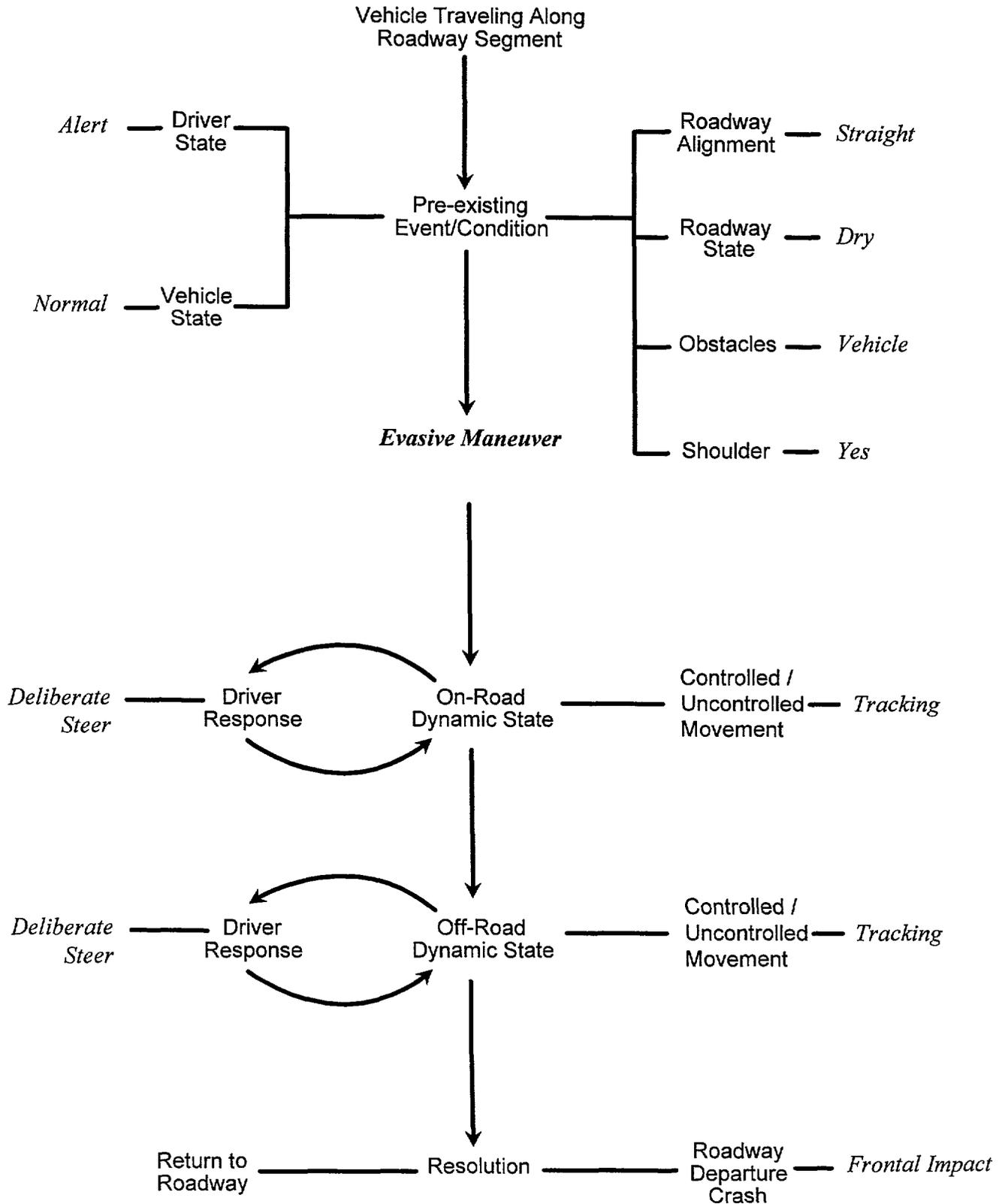
PSU No. 02

Case Number - Stratum 003H

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	2-1-93	Weather:	Snow/Sleet/Hail
Time:	1838	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:-	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	38	Year:	1987
Driver Sex:	Female	Vehicle Make:	Subaru
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	DL/FE/G/GF/ GLF/STD
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	99 Unknown		
GV64:	01 Going straight		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*

ROADSIDE DEPARTURE: *Right*

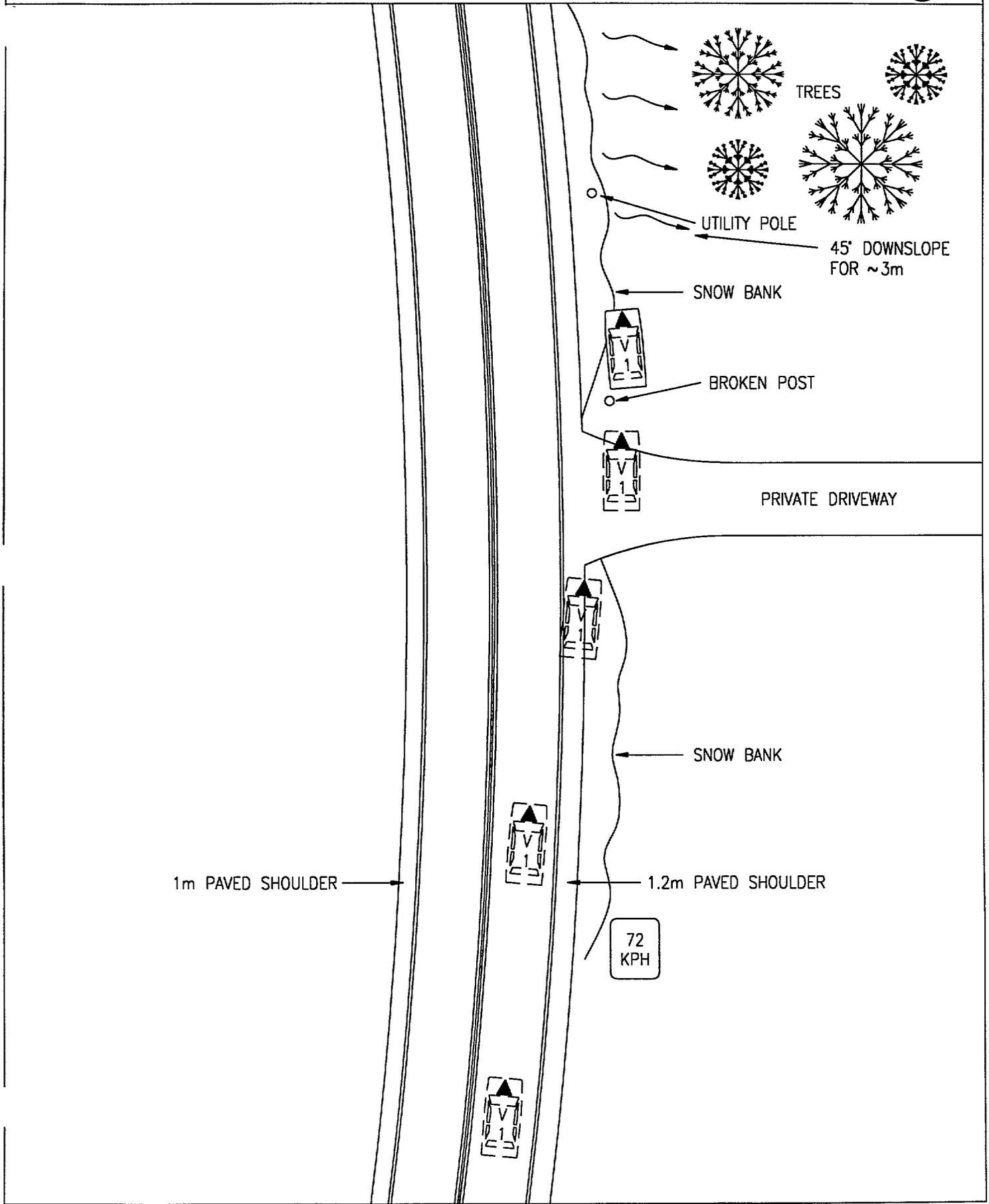
The subject vehicle was traveling in a northerly direction on a two-lane rural road in a 72 km/h (45 mph) speed zone. The roadway was snow covered and curved slightly to the left. The driver was intoxicated (BAC=0. 19) and allowed the subject vehicle to drift off the right road edge where it impacted a mailbox and overrode a snowbank before coming to rest on the opposite side of the snowbank. The asphalt roadway was snow-covered and the white edge lines were in poor condition. There were no reflective markers or delineators along the roadside. There were no large scale terrain features or visual obstructions.

ACCIDENT COLLISION DIAGRAM

PSU No. 02

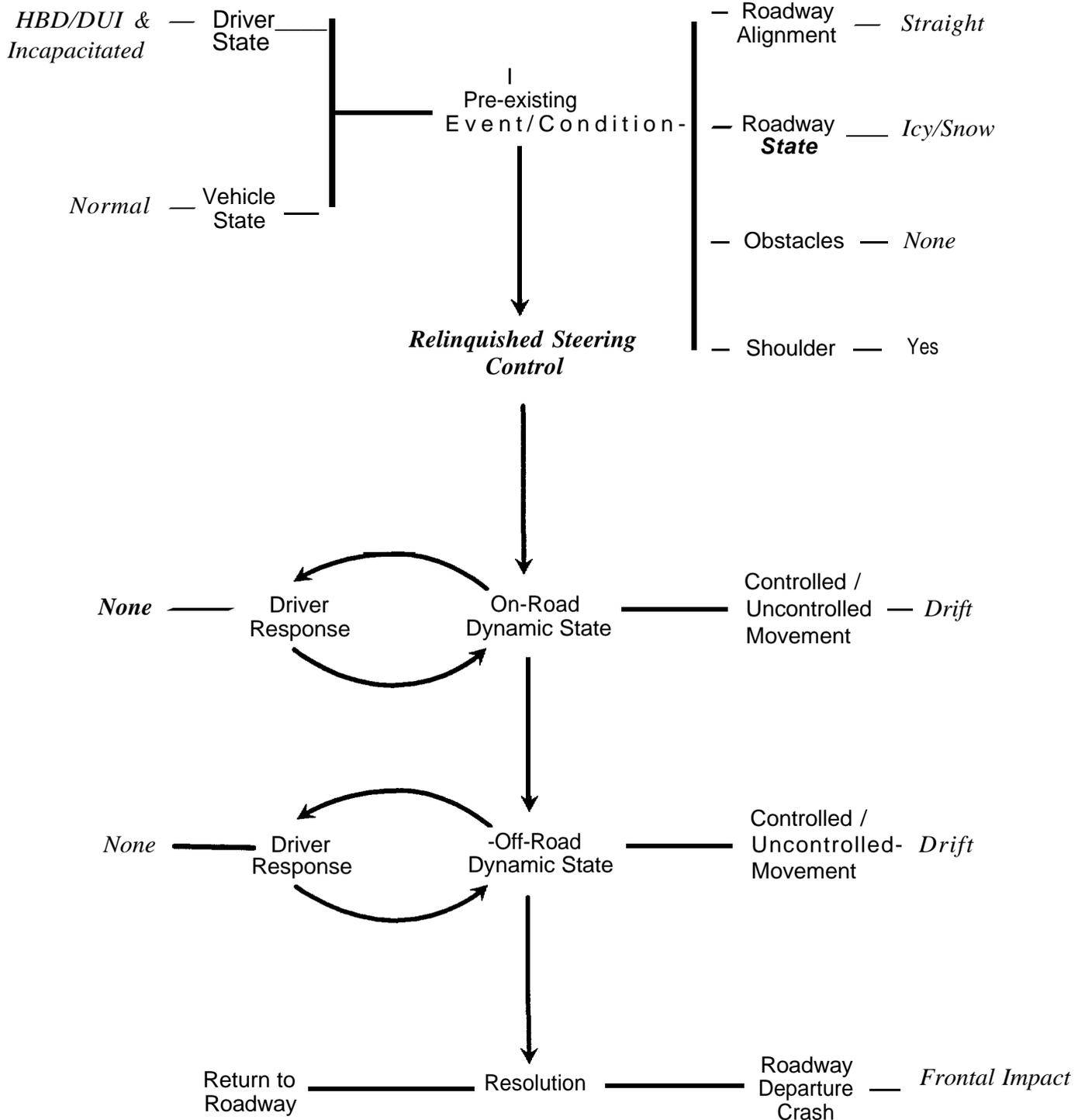
Case Number - Stratum 026H

Indicate North 



Vehicle Dynamic Scenario

Vehicle Traveling Along
Roadway Segment



CAUSAL FACTOR: Vehicle Speed - Unsafe Driving Act

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	2-3-93	Weather:	Snow/Sleet/Hail
Time:	1430	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	1 (C)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	22	Year:	1991
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Probe
Familiarity with Road:	Unknown	ABS:	Unknown
No. of Occupants:	1	Defects:	No
Roadway information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	99 Unknown		
GV64:	01 Going straight		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: *Vehicle Speed - Unsafe Driving Act*

ROADSIDE DEPARTURE: *Right*

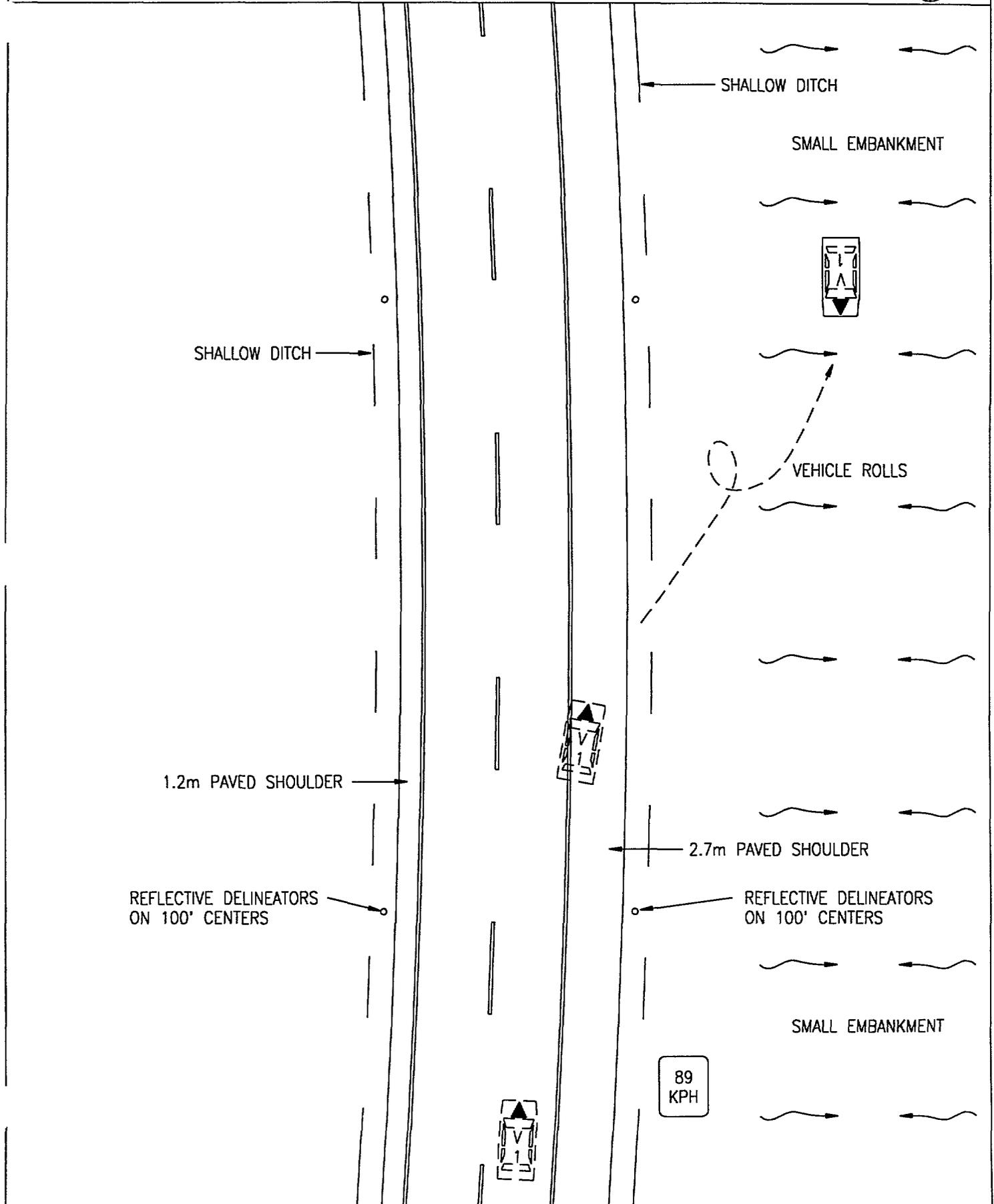
The subject vehicle was traveling in a northerly direction on a curved (left), two-lane, rural roadway during daytime hours. The ambient weather condition was snow and the roadway consisted of snow-covered asphalt with a broken centerline. There were reflective delineators distributed along the roadside. The speed limit was 89 km/h. The subject driver was traveling at a high rate of speed and allowed the vehicle to exit the right edge of the roadway. The subject vehicle subsequently rolled side-over-side to the right (one complete roll) and came to rest on it's wheels, facing in a southerly direction. The causal factor was vehicle speed, unsafe driving act.

ACCIDENT COLLISION DIAGRAM

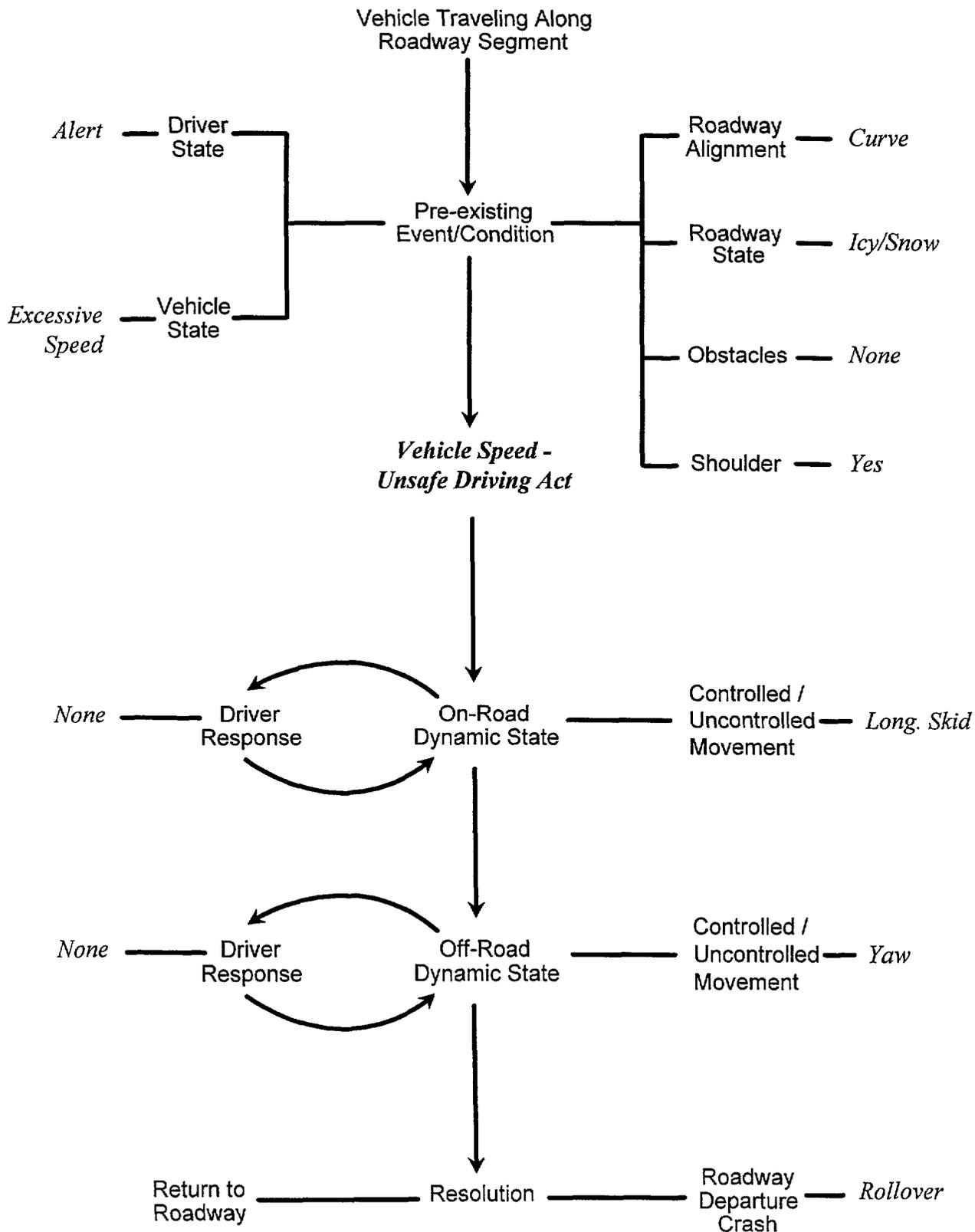
PSU No. 02

Case Number - Stratum 027E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	0130	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	17	Year:	1981
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Escort/EXP
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Unknown	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	99 Unknown		
GV64:	13 Negotiating a curve		
G V65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol

ROADSIDE DEPARTURE: Right

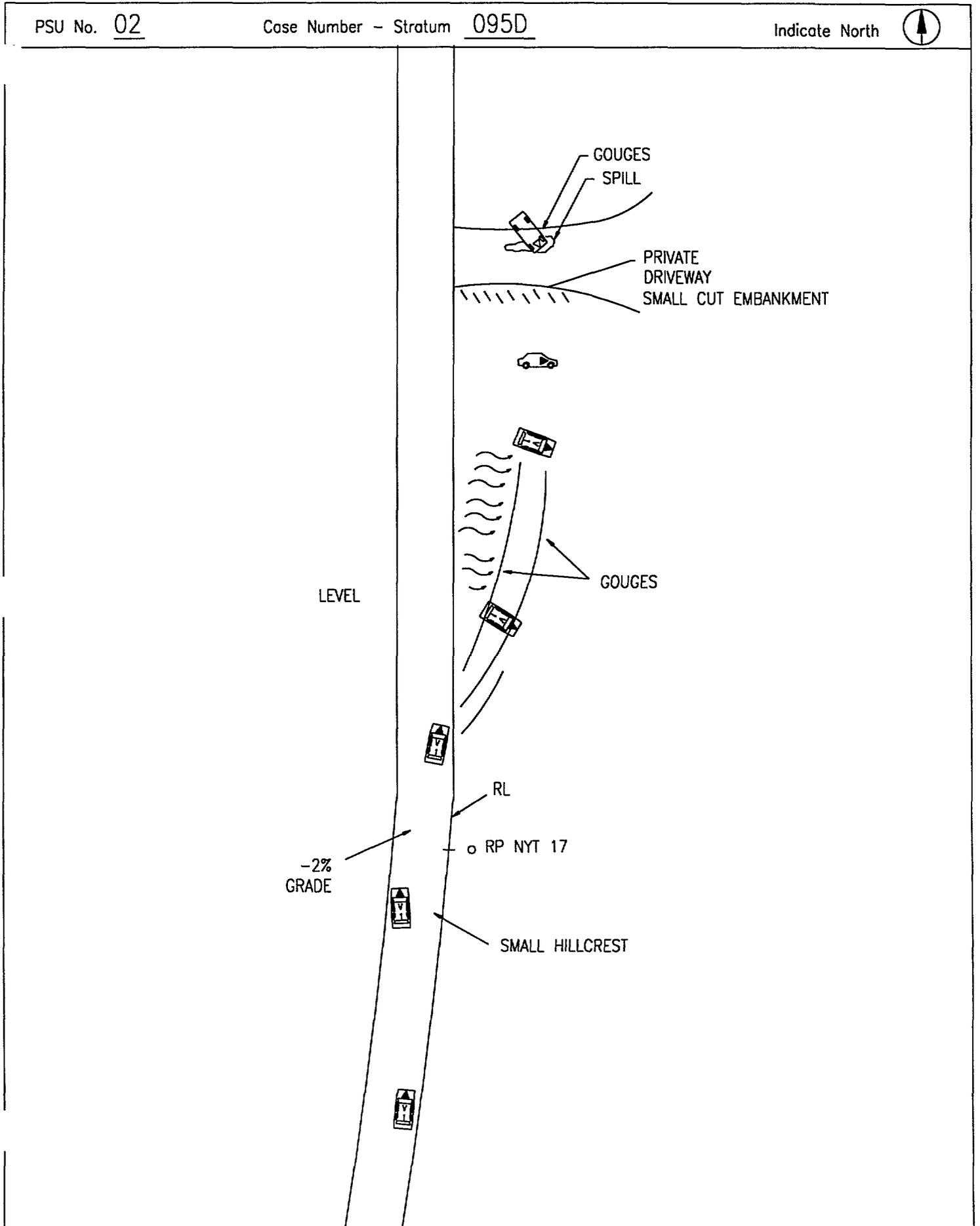
The subject vehicle was traveling in a northerly direction on a dry, two-lane, rural, asphalt roadway in a 56 km/h (35 mph) speed zone. The roadway curved to the left with a +1% slope at the apex of the curve. The driver was intoxicated and attempted to negotiate the left curve at an unsafe speed. The vehicle broke traction and yawed in a clockwise direction. The vehicle departed the right road edge and yawed 90 degrees counterclockwise before overturning onto an embankment. (The embankment would have prevented the vehicle from returning to the roadway.) The vertical alignment of the road along the subject vehicle's path of travel began with a slight positive grade followed by a hillcrest transition point at the apex of the curve, and a -1% slope at the point of departure. The road was 5.7 m in width with 0.6 m stone shoulders adjacent to both road edges. There were no pavement markings, reflective markers, or delineators along the road edges.

ACCIDENT COLLISION DIAGRAM

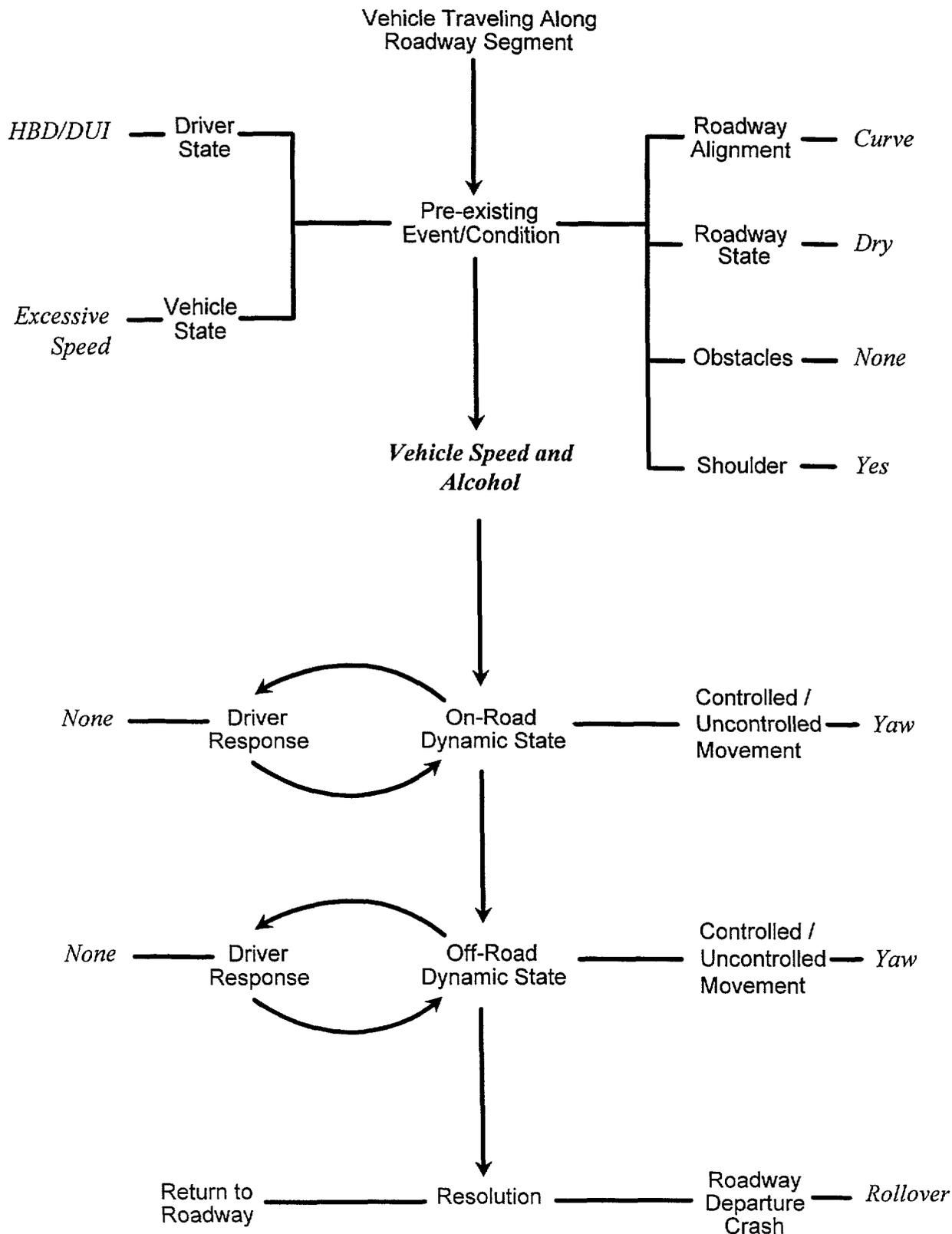
PSU No. 02

Case Number - Stratum 095D

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	7-6-93	Weather:	Clear/Cloudy
Time:	1330	Surface Condition:	Dry
Accident Type:	Avoid Collision	Lighting:	Daylight
Accident Severity:	1 (C)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	33	Year:	1992
Driver Sex:	Male	Vehicle Make:	Toyota
Impairment:	None	Vehicle Model:	Camry
Familiarity with Road:	Unknown	ABS:	Unknown
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	08 Braking and steering left		
GV64:	0 1 Going straight		
GV65:	60 Other vehicle encroaching into lane from adjacent lane (same direction) over left lane line		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

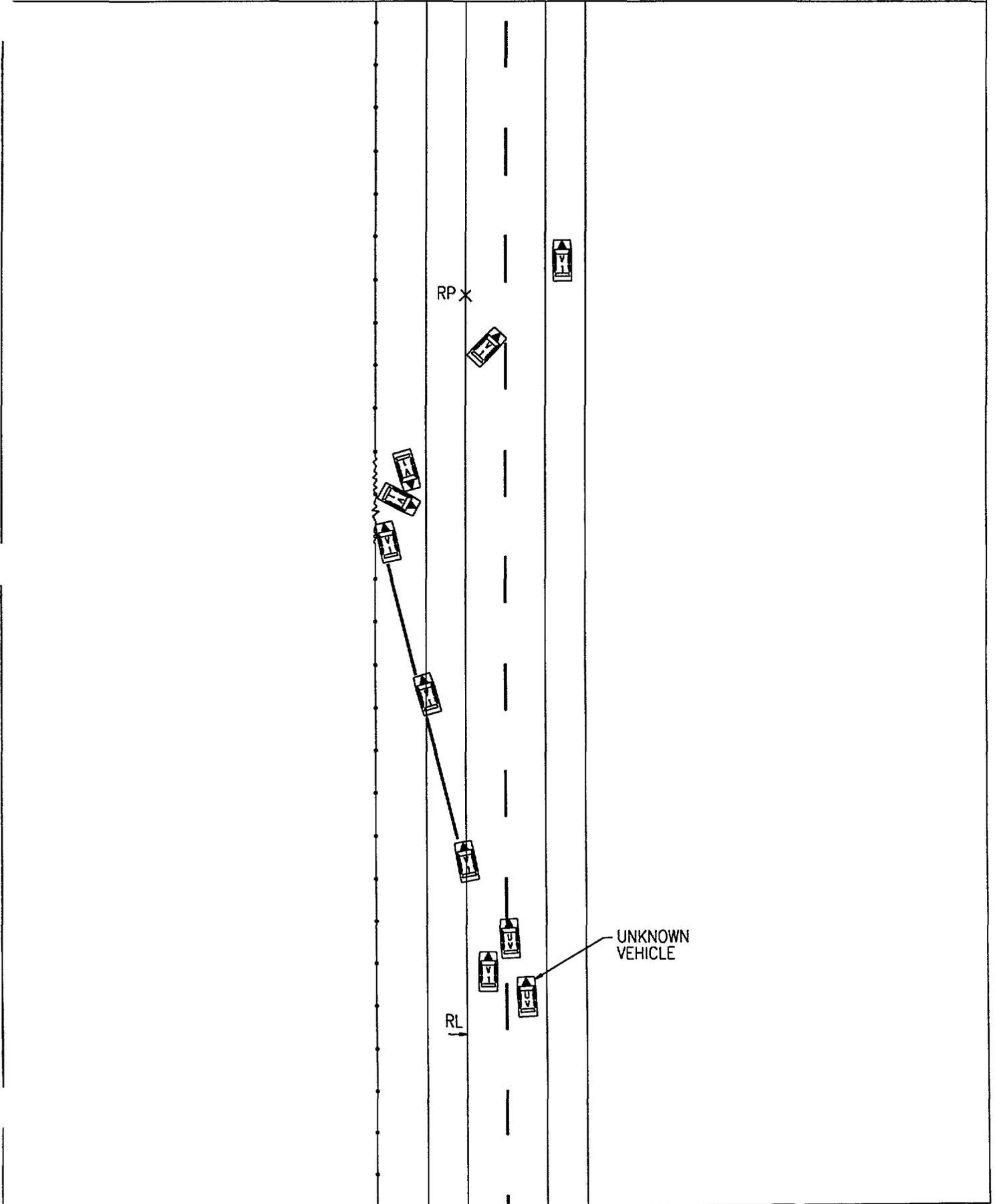
The subject vehicle was traveling south on the inboard lane of a dry, four-lane, asphalt interstate divided by a median barrier guardrail and was approaching a construction zone. The road surface had a -3% slope to the south and was straight with no superelevation. The driver observed a non-contact vehicle encroaching from the right lane, swerved to the left, and braked with sufficient force to lock the wheels of the vehicle. The vehicle rotated in a counterclockwise direction across the inboard shoulder and grass median and impacted the median barrier guardrail. At impact with the guardrail, the vehicle rotated 90 degrees in a counterclockwise direction. The vehicle continued to rotate counterclockwise and subsequently impacted the barrier with the right rear area. Scene physical evidence consisted of four counterclockwise yaw marks across the shoulder and grass median. The two southbound travel lanes were 3.7 m in width with a 3.2 m wide right shoulder and a 3.8 m inboard paved shoulder. The painted edge lines and broken white lane lines were in good condition. There were reflective delineators located along the outboard edges of both shoulders.

ACCIDENT COLLISION DIAGRAM

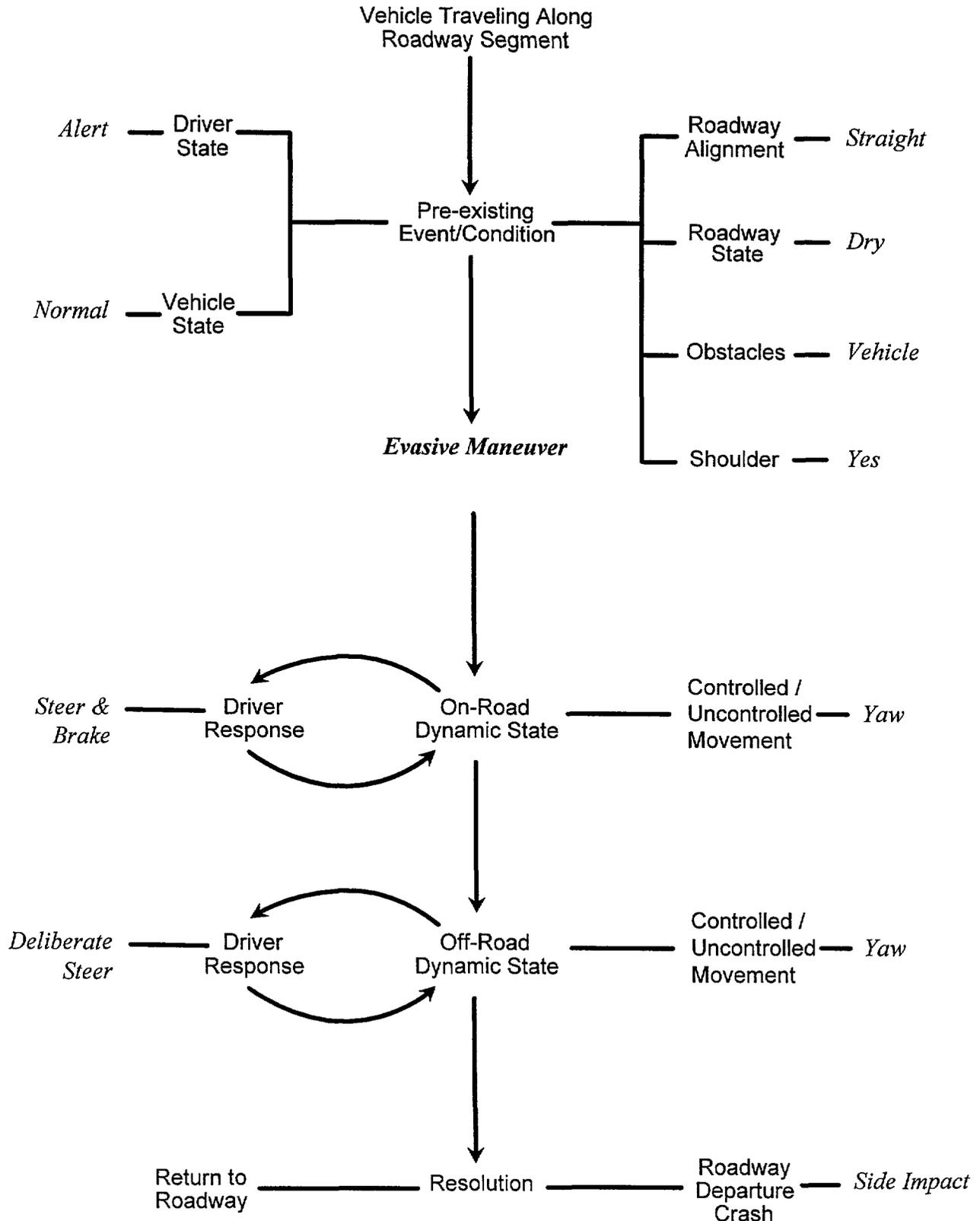
PSU No. 02

Case Number - Stratum 096E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	0045	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	67	Year:	1986
Driver Sex:	Male	Vehicle Make:	Oldsmobile
Impairment:	Fell Asleep	Vehicle Model:	Cutlass
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	07 Steering right		
GV64:	01 Going straight		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	4 Skidding laterally - counterclockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*
ROADSIDE DEPARTURE: *Left*

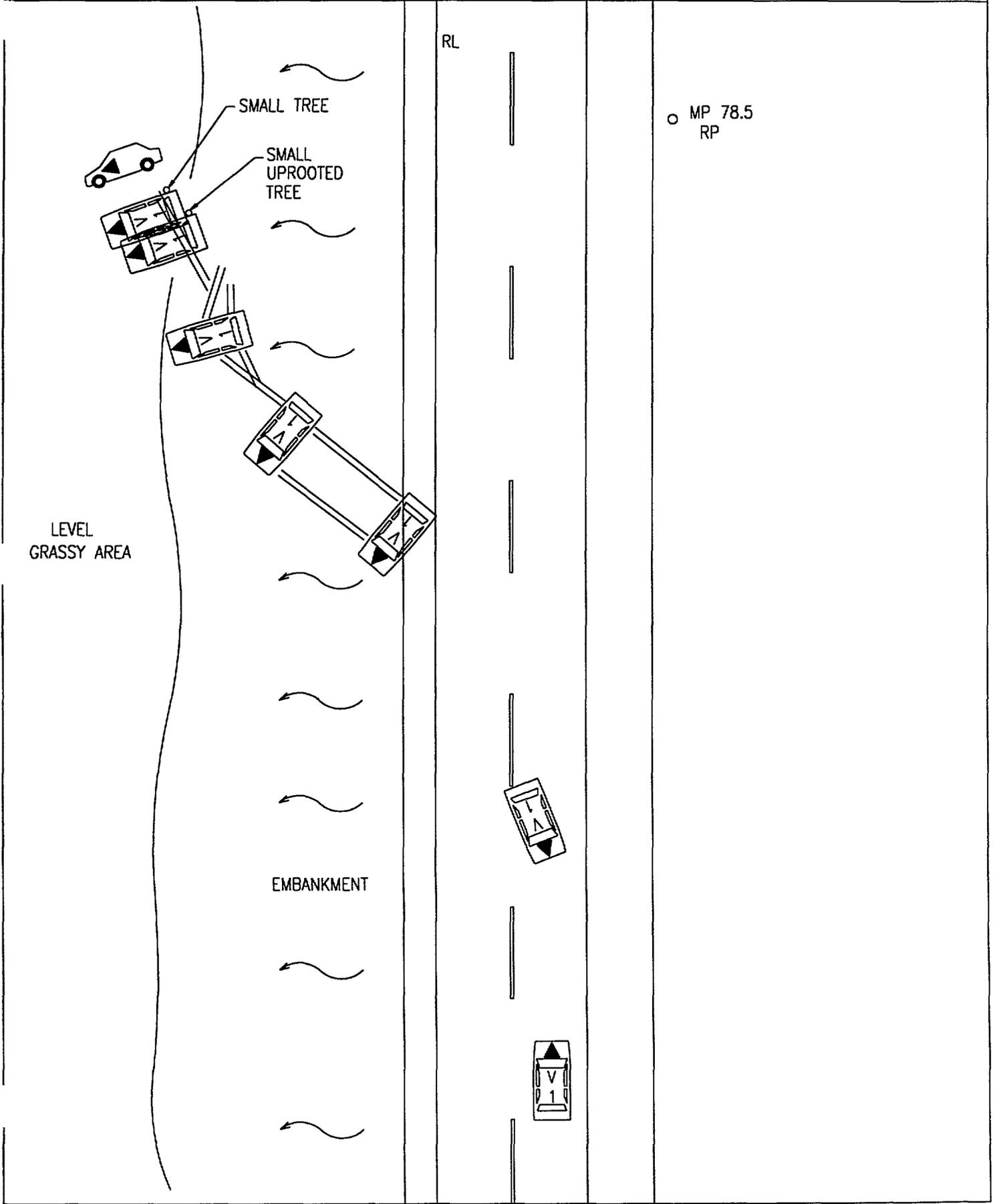
The subject vehicle was traveling on the outboard southbound lane of a dry, level, rural, four-lane, divided, asphalt interstate roadway during nighttime hours. The southbound travel lanes curved slightly to the right and were divided from the northbound lanes by a grass median with a shallow ditch and small diameter trees. The vehicle was traveling at a driver estimated speed of 97-105 km/h (60-65 mph) in an 89 km/h (55 mph) speed zone. The driver apparently fell asleep and relinquished control of the vehicle. The vehicle drifted across the inboard lane and departed the inboard shoulder onto the grass median. The driver induced rapid steering maneuvers which resulted in a 90 degree counterclockwise yaw onto the median. The vehicle traversed a ditch and overturned. The outboard southbound travel lane was 3.7 m in width and the inboard lane was 3.8 m wide. The outboard (right) shoulder was paved and was with the travel lane, and was 3.3 m wide. The inboard (left) shoulder was flush, was paved, and was 1.6 m in width. Located outboard of both shoulders were reflective delineators which were approximately 30 m apart. The roadway and all pavement markings (edge lines and lane lines) were in good condition.

ACCIDENT COLLISION DIAGRAM

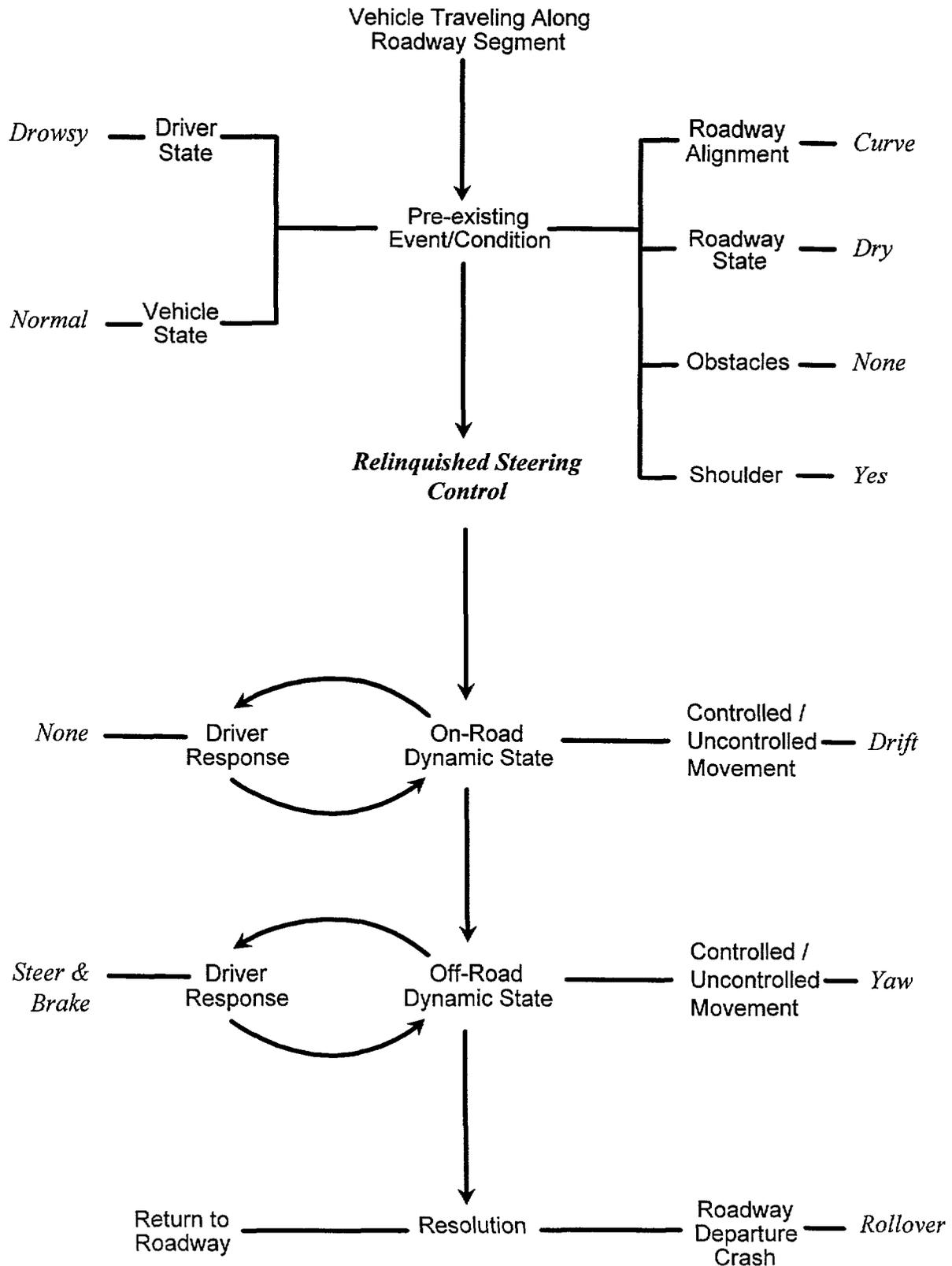
PSU No. 02

Case Number - Stratum 097F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Attempted to Initiate a 90 Degree Turn
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	1240	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	2 (B)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	47	Year:	1983
Driver Sex:	Male	Vehicle Make:	Cadillac
Impairment:	None	Vehicle Model:	DeVille/ Fleetwood
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	02 Braking (no lockup)		
GV64:	13 Negotiating a curve		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR; *Vehicle Speed - Attempted to Initiate a 90 Degree Turn*
ROADSIDE DEPARTURE: *Left*

The subject vehicle was traveling in a southerly direction on a wet, rural, two-lane, asphalt roadway with a -2% slope on an approach to a 90 degree right curve. The posted speed limit was 56 km/h (35 mph). There were no shoulders, pavement markings, or reflective reflectors/delineators in the area of the scene. Both edges of the road were bordered by W-beam guardrails that extended across a small bridge. The vehicle approached the right curve at a police reported unsafe speed. The driver braked (no lock-up) on the approach to the curve, however, the vehicle broke traction and the driver backed-off the brake application. The driver again applied a braking force and the vehicle yawed slightly in a clockwise direction and departed the left road edge. The left frontal area of the vehicle impacted the W-beam guardrail. There was a 3 m left front tire mark across the loose stones at the left edge of the road immediately prior to the impact.

ACCIDENT COLLISION DIAGRAM

PSU No. 02

Case Number - Stratum 100F

Indicate North



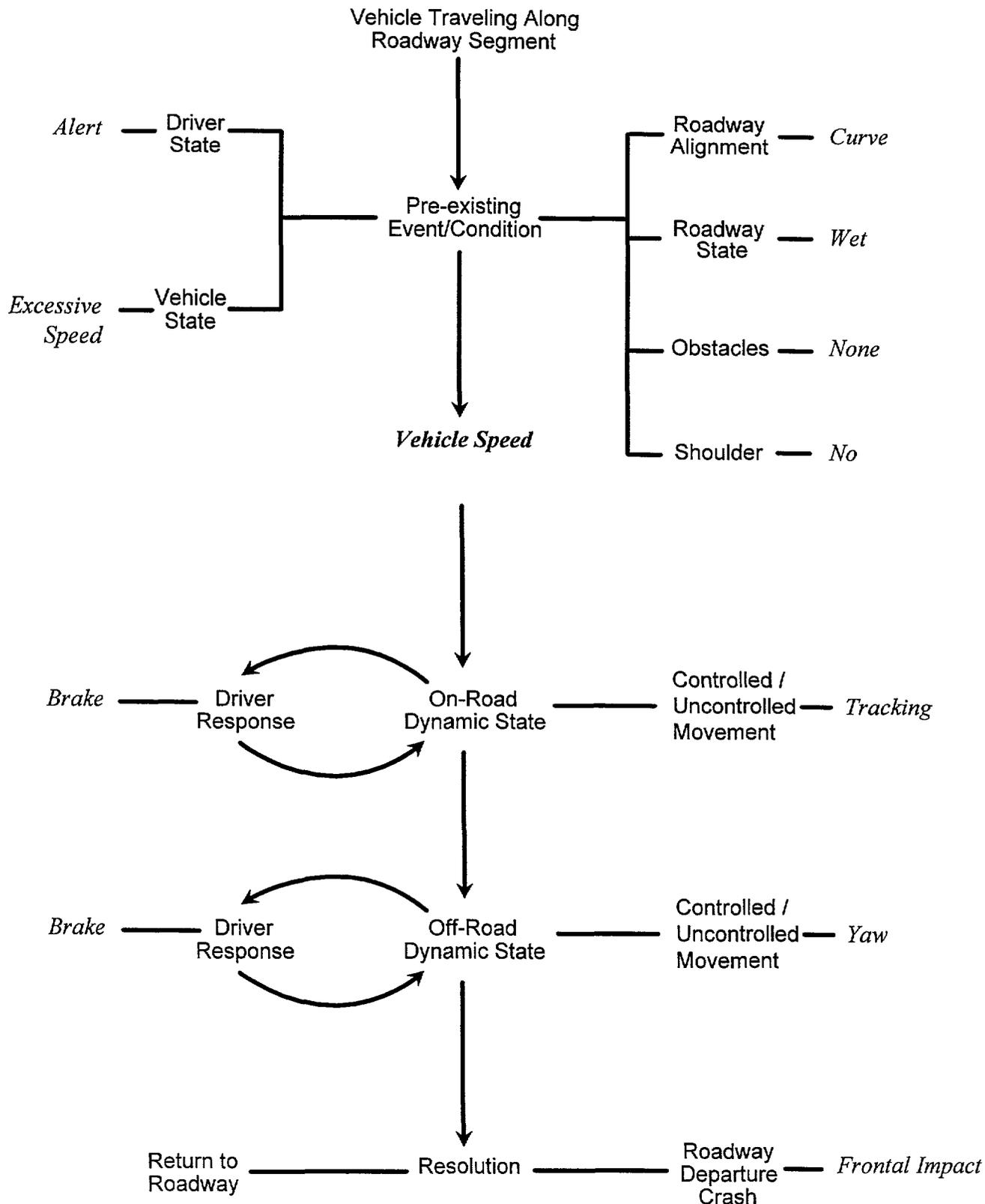
DAMAGED POSTS
RED PAINT ON RAIL

RL

○ RP
NYT6
361

STREAM

Vehicle Dynamic Scenario



CAUSAL FACTORS *Vehicle Speed - Unsafe Driving Act*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	7-2-93	Weather:	Rain
Time:	2000	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	20	Year:	1977
Driver Sex:	Male	Vehicle Make:	Toyota
Impairment:	None	Vehicle Model:	Pickup
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	48 km/h
Cluster Variables			
GV14:	08 Braking and steering left		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Unsafe Driving Act*

ROADSIDE DEPARTURE: *Right*

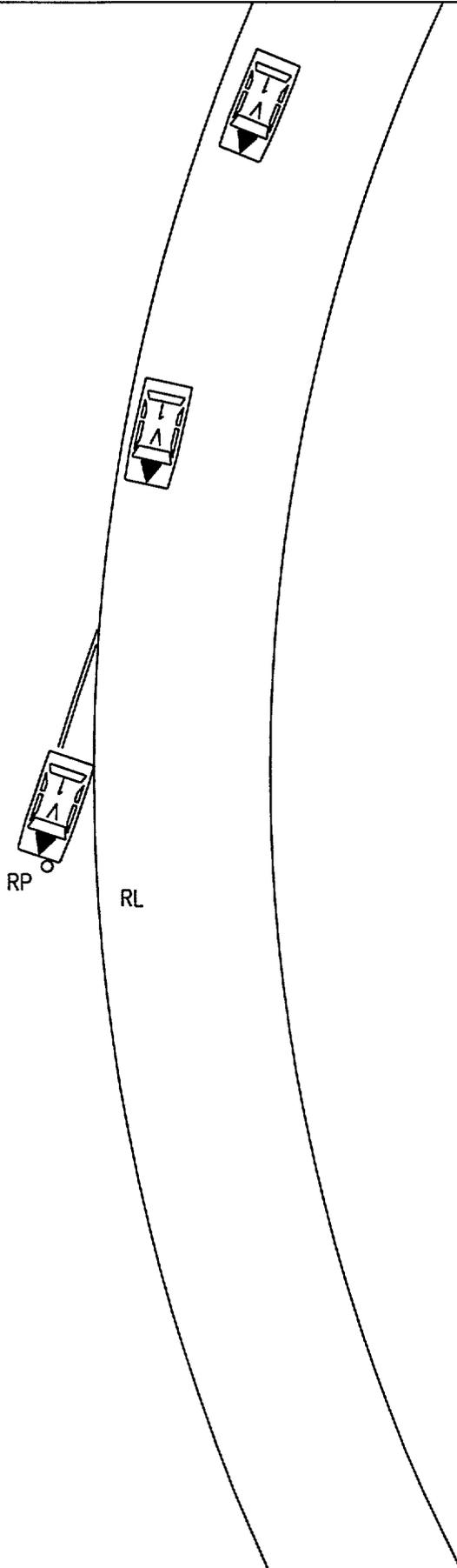
The subject vehicle was traveling in a westerly direction on a wet, rural, two-lane, asphalt roadway during dark, unlighted conditions. The roadway curved left with a reported -2% slope, straightened for approximately 15 m, and then began to curve to the right. The driver exited the left curve and lost control due to unsafe speed on the wet road and departed the right road edge. The center frontal area of the vehicle impacted a 0.3 m diameter tree which resulted in a 43 km/h (27 mph) change in velocity. Scene evidence indicated braking with lockup prior to the crash. There were 7.9 m of skid marks that extended on the asphalt and wet grass surfaces. The road surface was 6.7 m in width with no shoulders on either side. White edge lines marked both road edges, but there were no center lines. There were no reflective markers or delineators at the road edge. The speed limit was 48 km/h (30 mph). The PAR noted speed as a contributing factor to the crash.

ACCIDENT COLLISION DIAGRAM

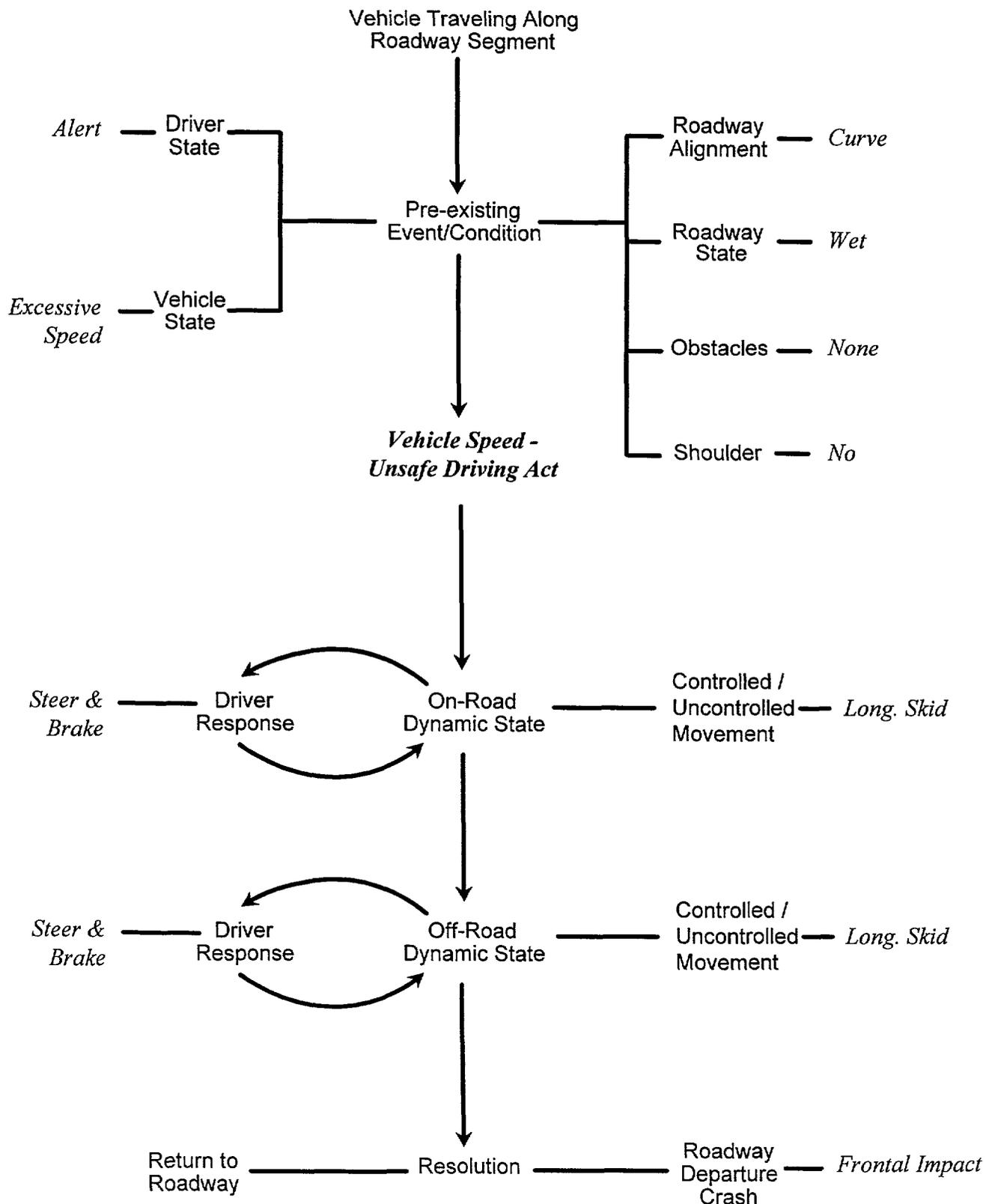
PSU No. 02

Case Number - Stratum 104D

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	S-1-93	Weather:	Clear/Cloudy
Time:	0835	Surface Condition:	Dry
Accident Type:	Avoid Collision	Lighting:	Daylight
Accident Severity:	2 (B)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	58	Year:	1992
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Unknown (automobile)
Familiarity with Road:	Unknown	ABS:	Unknown
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	07 Steering right		
G V64:	01 Going straight		
GV65:	60 Other vehicle encroaching into lane from adjacent lane (same direction) over left lane line		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Right*

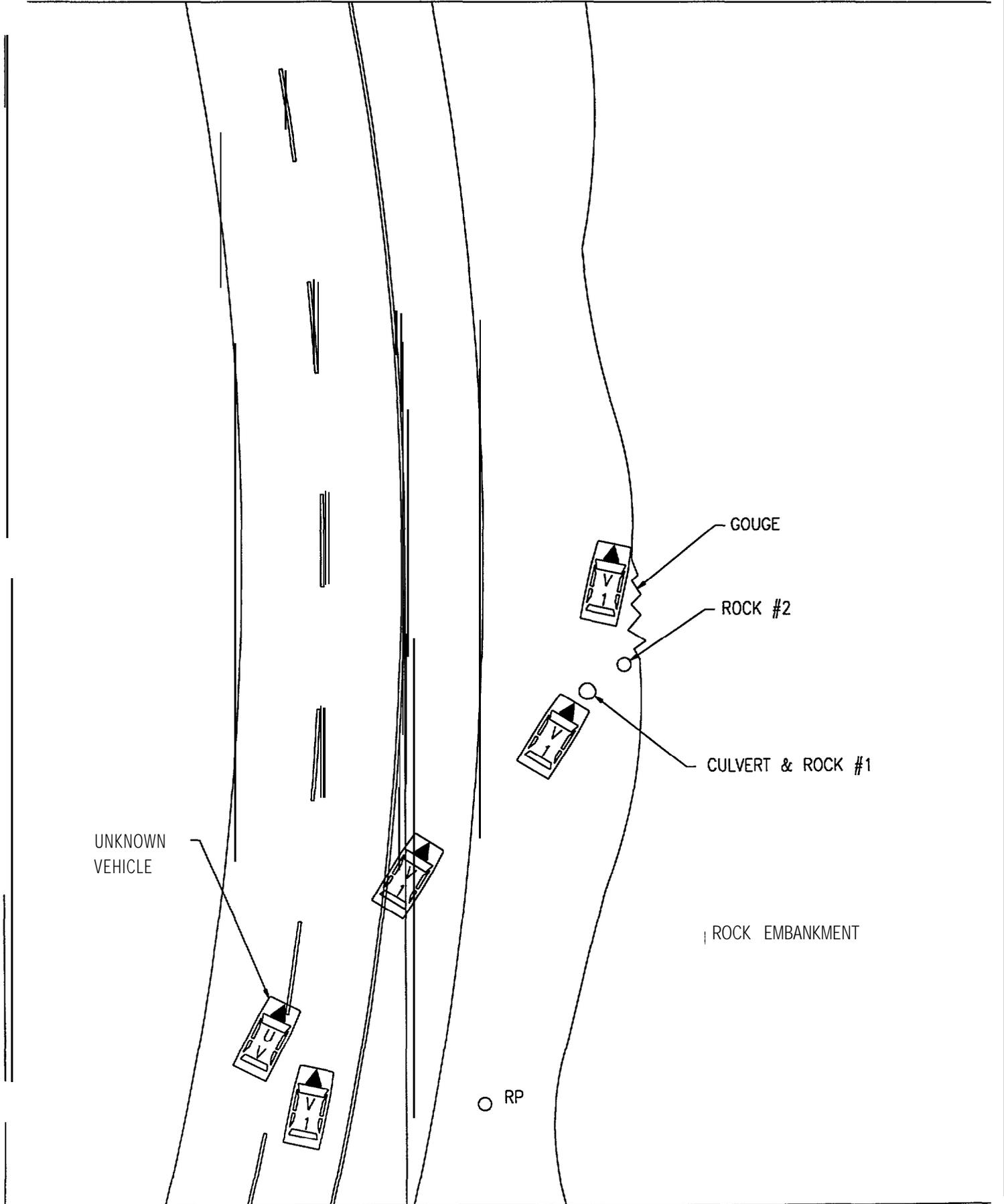
The subject vehicle was proceeding on a left curve segment of a dry, four-lane, divided, interstate roadway during daylight hours. The roadway consisted of two lanes in each direction that were divided by a W-beam guardrail median barrier. The subject vehicle was traveling on the outboard northbound lane when a non-contact vehicle initiated a lane change maneuver from the left lane into the right outboard lane. The subject driver steered onto the right shoulder to avoid the encroaching vehicle. The subject vehicle departed the shoulder and impacted an embankment with the right front side area of the vehicle. The northbound travel lanes were each 3.8 m in width, with a 3.8 m outboard shoulder, and a 2.9 m wide left shoulder. Both shoulders were paved and were flush with the travel lanes. The road edges were marked with solid edge lines that were in new condition, while the lane lines were white broken lines that were also in new condition. There were reflective delineators outboard of the shoulders along each side of the northbound lanes.

ACCIDENT COLLISION DIAGRAM

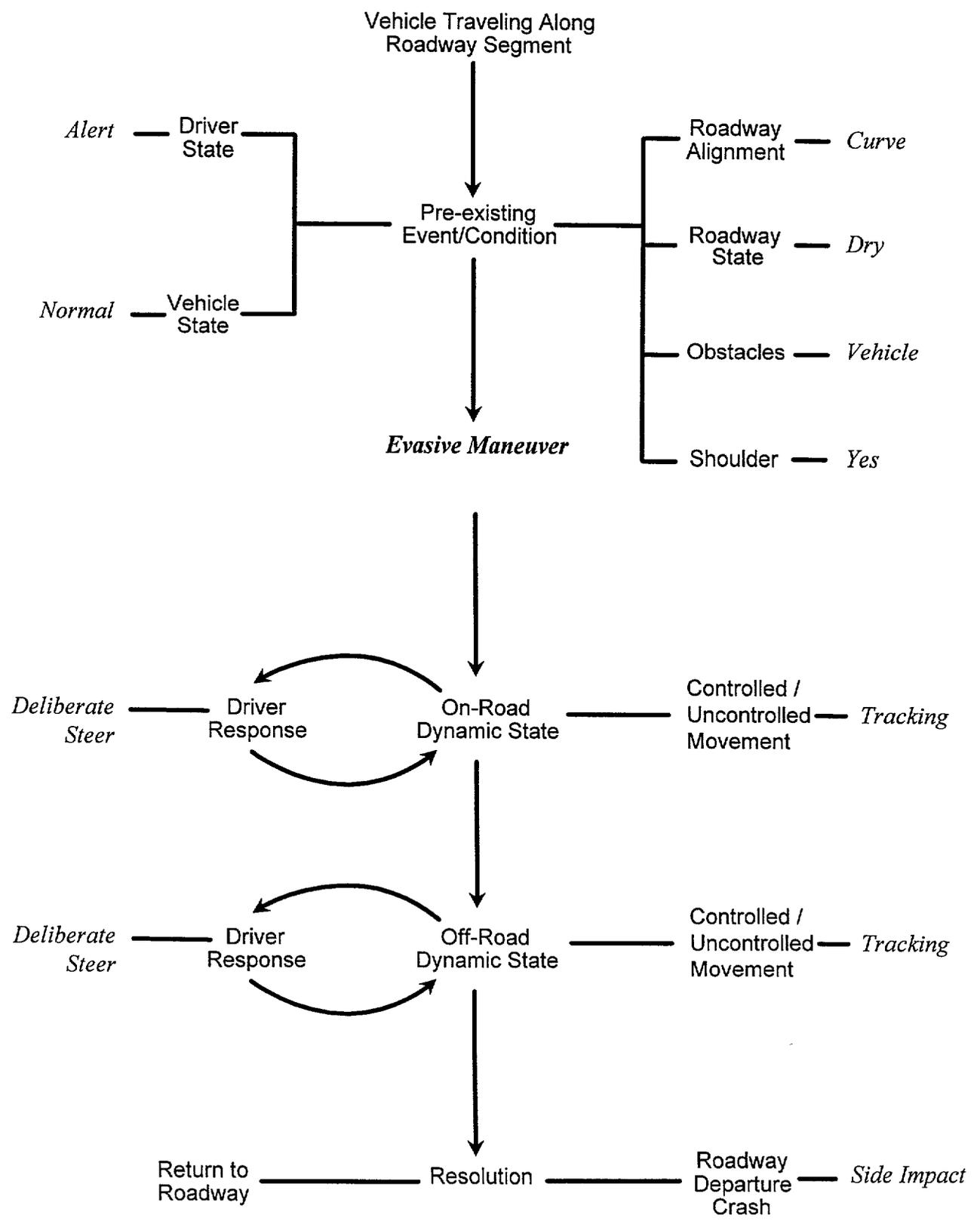
PSU No. 02

Case Number - Stratum 115E

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*

ROADSIDE DEPARTURE: *Left*

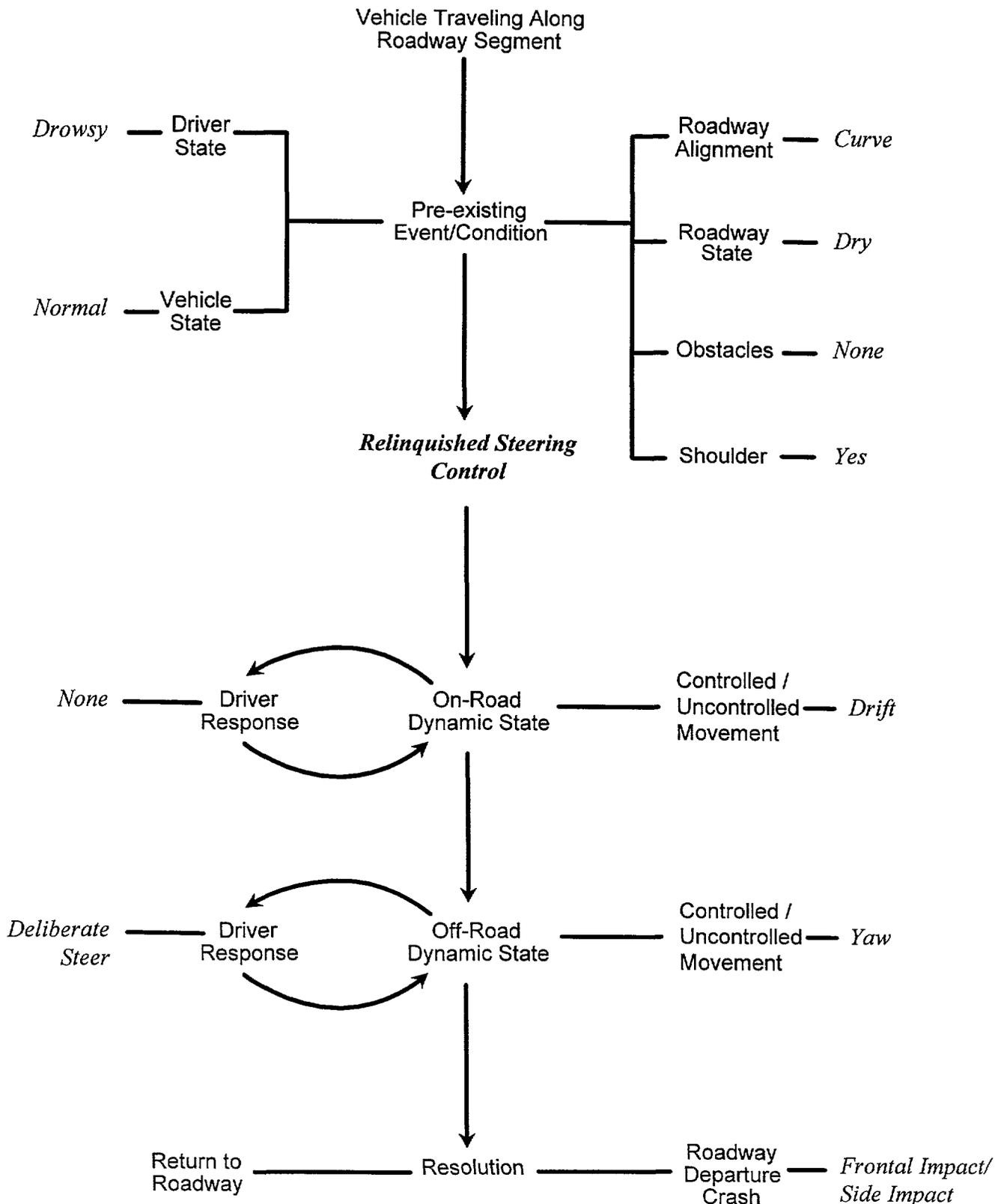
General Accident Information			
Date:	8-1-93	Weather:	Fog
Time:	0625	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	1 (C)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	27	Year:	1992
Driver Sex:	Male	Vehicle Make:	Mazda
Impairment:	Fell Asleep	Vehicle Model:	GLC/323/ Protege
Familiarity with Road:	No	ABS:	No
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	0 1 Going straight		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*

ROADSIDE DEPARTURE: *Left*

The subject vehicle was traveling in a northerly direction on a foggy, dry, rural, four-lane, divided, asphalt interstate during the early morning daylight hours. The roadway curved slightly to the right and was level with paved shoulders adjacent to each road edge. A W-beam median barrier guardrail was located 5.5 m west of the inboard road edge line. A ditch paralleled the outboard shoulder approximately 6 m out. The vehicle was traveling on the inboard lane at a driver estimated speed of 101-105 km/h (63-65 mph) in a posted 89 km/h (55 mph) speed zone. The driver fell asleep and as a result, the vehicle drifted off the left road edge. The vehicle impacted a reflective delineator post with the center frontal area. The driver subsequently initiated a clockwise steering input as the left side of the vehicle sideswiped the W-beam median barrier guardrail. The vehicle yawed in a clockwise direction and reentered the roadway crossing both travel lanes before departing the right shoulder. The left side of the vehicle impacted the ditch before coming to rest adjacent to the ditch. The edge lines were painted and were in good condition. Reflective delineators were set at 30 m intervals along the outboard edges of both shoulders. There were no reflective markers on the pavement. There were no other terrain features or obstacles.

Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Excessive
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	8-3-93	Weather:	Clear/Cloudy
Time:	1430	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	46	Year:	1985
Driver Sex:	Female	Vehicle Make:	Lincoln
Impairment:	None	Vehicle Model:	Unknown (automobile)
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	4	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	04 Braking (lockup unknown)		
G V64:	01 Going straight		
GV65:	50 Other motor vehicle in lane, stopped		
GV66:	4 Skidding laterally - counterclockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: *Left*

The subject vehicle was traveling in a northerly direction on the inboard lane of a dry, straight, four-lane, divided, asphalt interstate with an estimated -1.5% slope and posted speed limit of 89 km/h (55 mph). The driver was traveling at a police reported unsafe speed and noted stopped traffic ahead due to a previous accident. The driver braked and the vehicle subsequently skidded off the left (inboard) road edge onto the grass median and impacted a W-beam median barrier guardrail. Both shoulders were paved and reflective delineators were present on the outboard sides of the shoulders.

ACCIDENT COLLISION DIAGRAM

PSU No. **02**

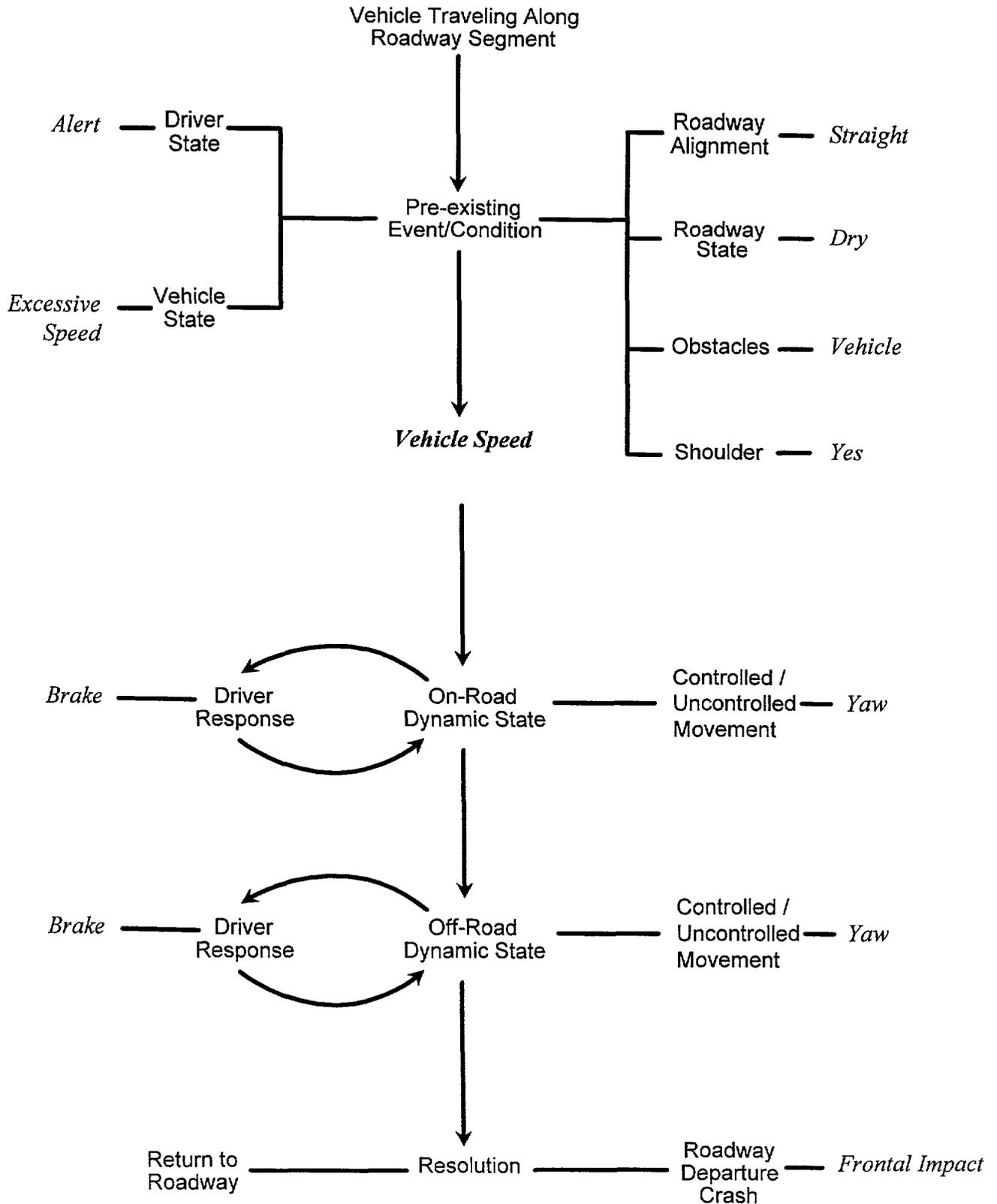
Case Number - Stratum 122H

ACCIDENT COLLISION DIAGRAM

NOT AVAILABLE AT THE

TIME OF THIS PRINTING

Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Unsafe Driving Act

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	2-1-93	Weather:	Clear/Cloudy
Time:	2335	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Artificial lighting
Accident Severity:	3 (A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	22	Year:	1979
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Mustang/ Mustang II
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	3	Slope:	Level
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	0 1 Going straight		
GV65:	05 This vehicle loss of control due to poor road conditions		
GV66:	1 Tracking		
GV67:	1 Vehicle stayed in travel lane where avoidance maneuver was initiated		

CAUSAL FACTOR: *Vehicle Speed - Unsafe Driving Act*

ROADSIDE DEPARTURE: *Left*

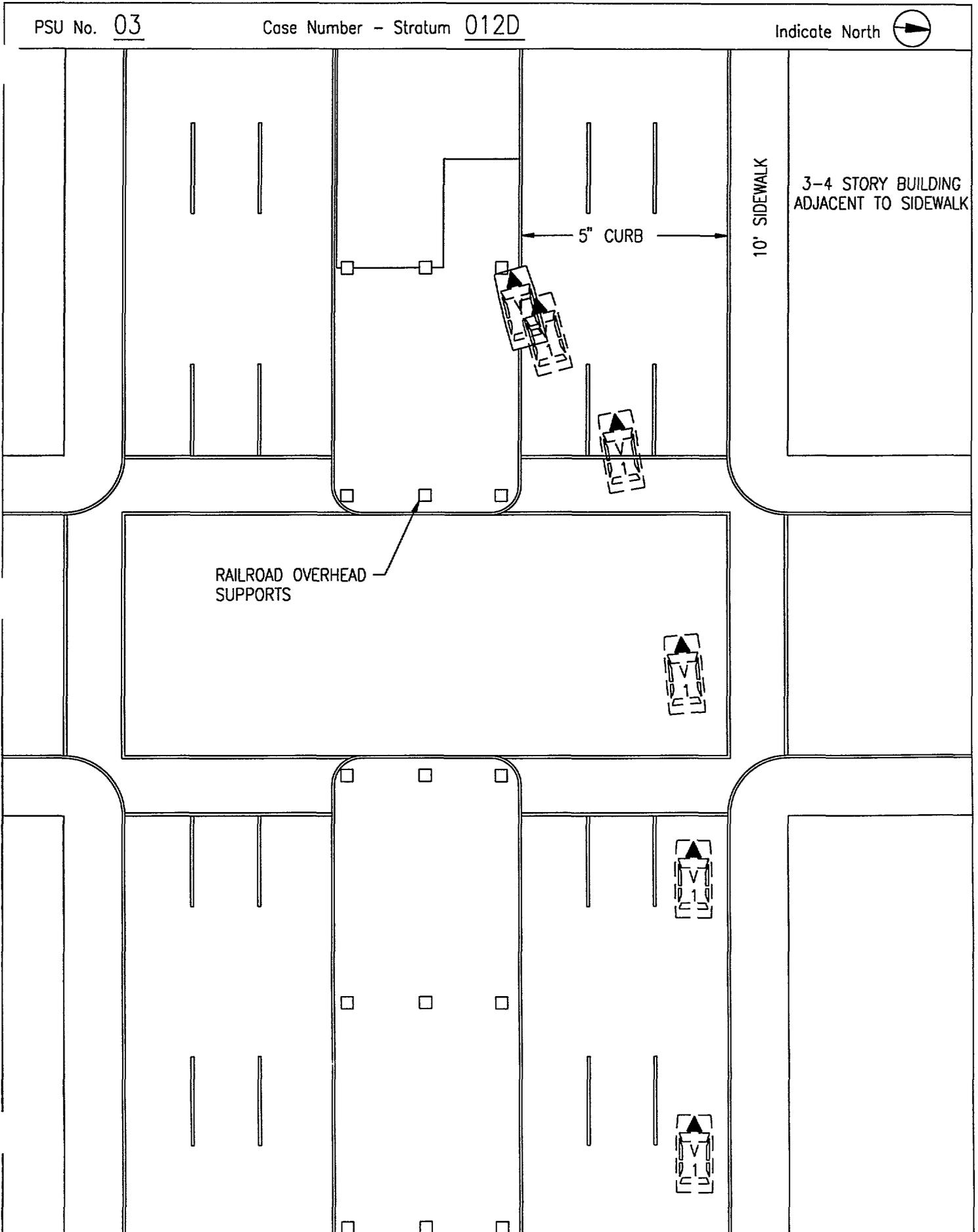
The subject vehicle was traveling in a westerly direction on an icy, urban, six-lane, divided, asphalt roadway approaching a four-leg intersection that was controlled by a traffic signal. The driver estimated the vehicle's speed at 16-24 km/h (10-15 mph) as it traversed the intersection. The vehicle broke traction on the icy road surface, yawed in a counterclockwise direction, and departed the left (inboard) road edge. The left frontal area of the vehicle impacted a bridge support pillar. The estimated maximum crush was 72 cm. There was no measured crush profile. The causal factor was driver traveling at an unsafe speed for the icy road conditions.

ACCIDENT COLLISION DIAGRAM

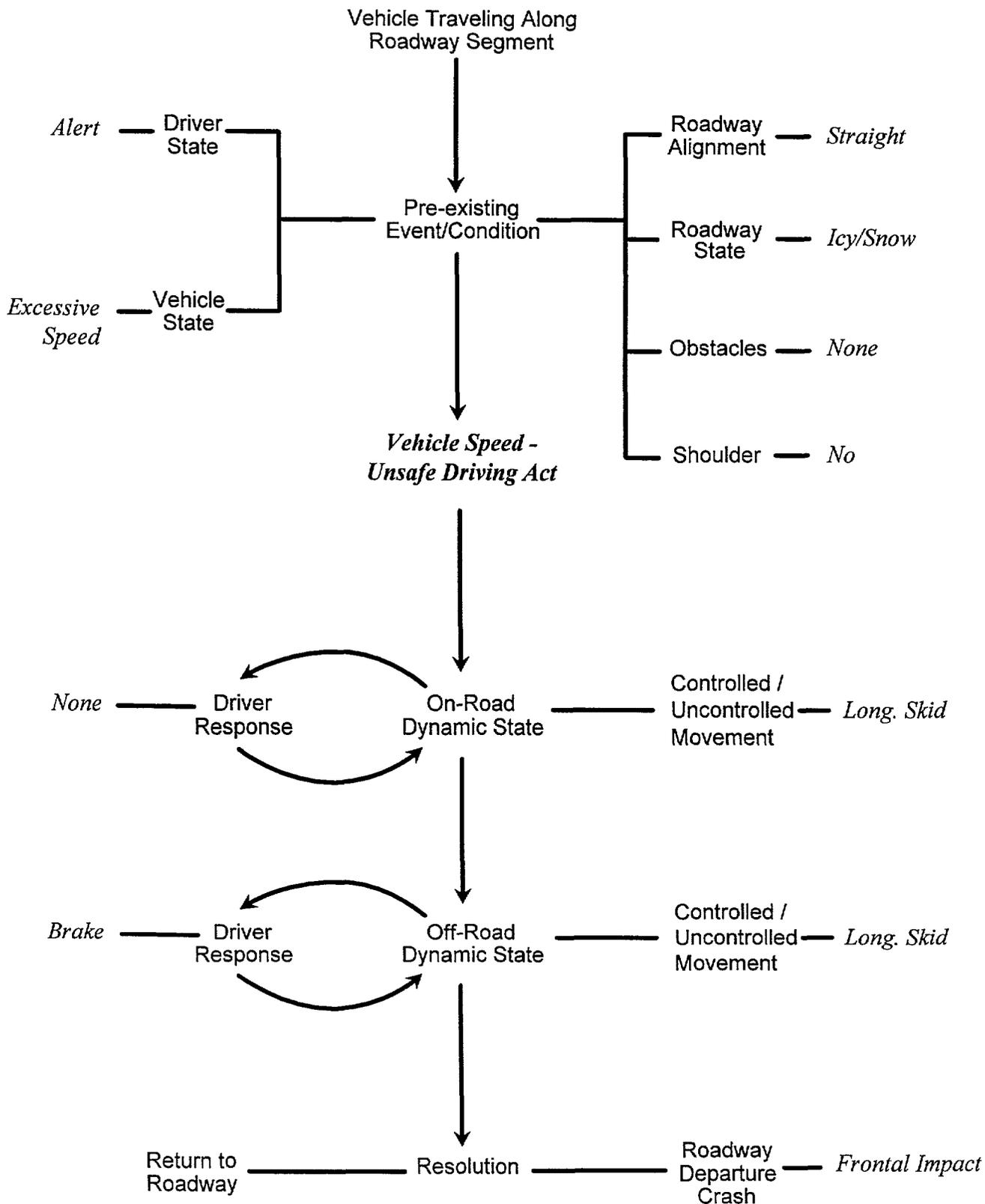
PSU No. 03

Case Number - Stratum 012D

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	3-2-93	Weather:	Clear/Cloudy
Time:	1457	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	3(A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	35	Year:	1983
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	G-series van
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	3	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	08 Braking and steering left		
GV64:	01 Going straight		
GV65:	51 Other motor vehicle in lane traveling in same direction with lower speed		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

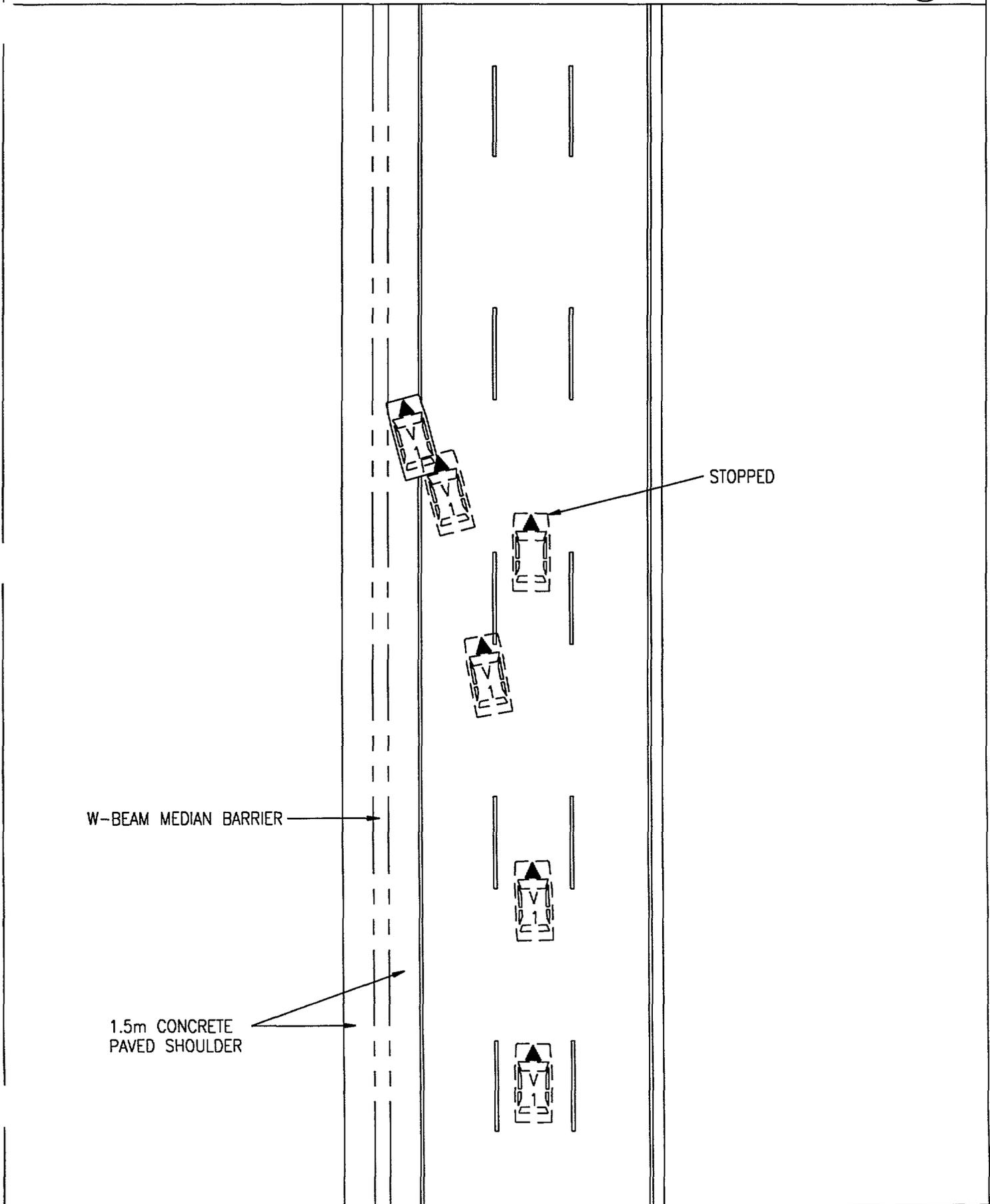
The subject vehicle was traveling in the center lane of an urban, straight, level, six-lane, divided, asphalt expressway during daylight hours at a driver estimated speed of 72 km/h (45 mph). A non-contact lead vehicle stopped suddenly in the center lane. The subject driver braked and steered left to avoid the non-contact vehicle. The subject vehicle yawed in a counterclockwise direction and departed the left (inboard) shoulder and impacted the W-beam median barrier guardrail. The causal factor was reported as an evasive action to avoid the stopped vehicle.

ACCIDENT COLLISION DIAGRAM

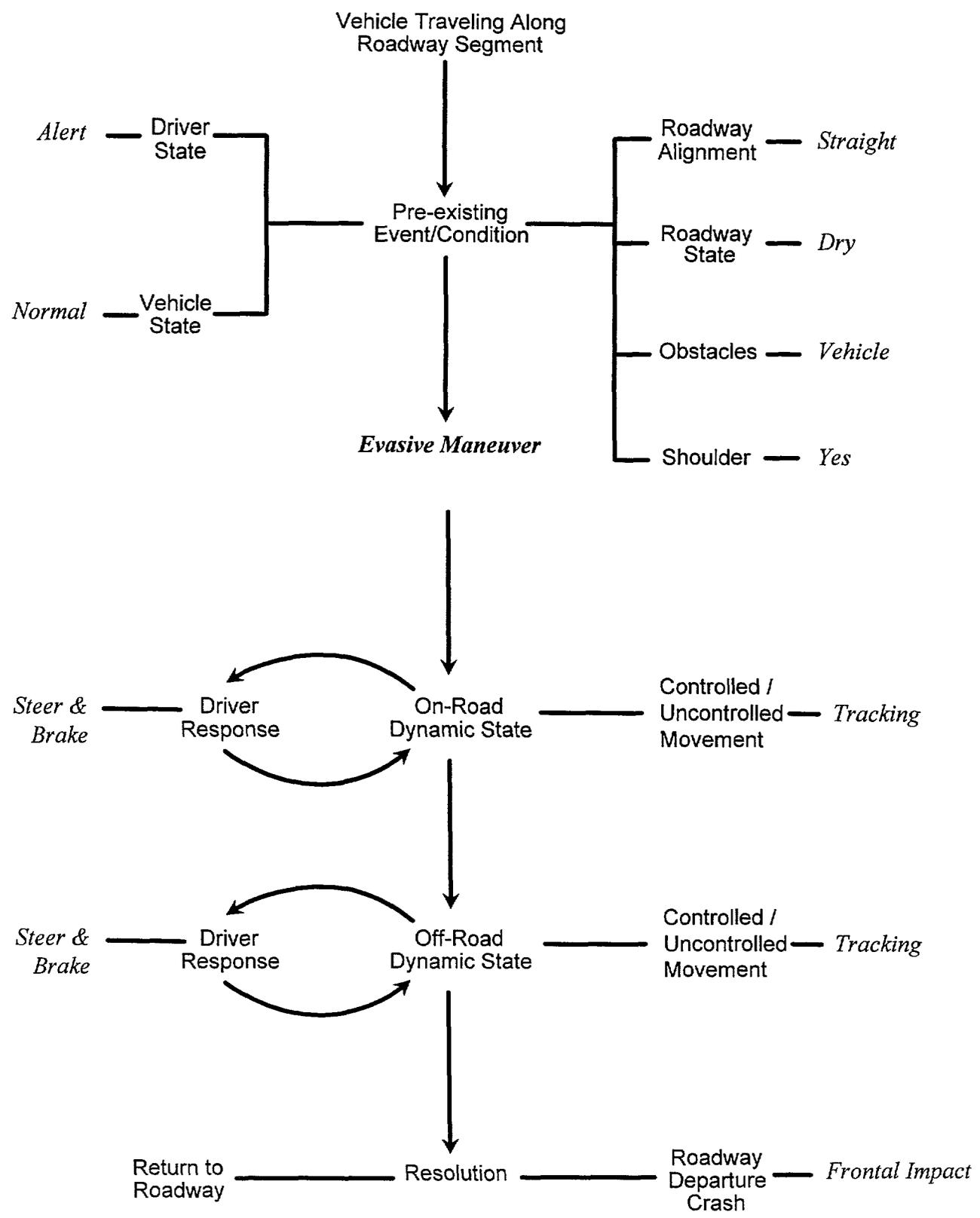
PSU No. 03

Case Number - Stratum 019D

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	8-3-93	Weather:	Rain
Time:	0745	Surface Condition:	Wet
Accident Type:	Avoid Collision	Ligh ting:	Daylight
Accident Severity:	1 (C)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	28	Year:	1987
Driver Sex:	Male	Vehicle Make:	Toyota
Impairment:	None	Vehicle Model:	Camry
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	3	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	09 Braking and steering right		
GV64:	01 Going straight		
GV65:	60 Other vehicle encroaching into lane from adjacent lane (same direction) over left lane line		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Right*

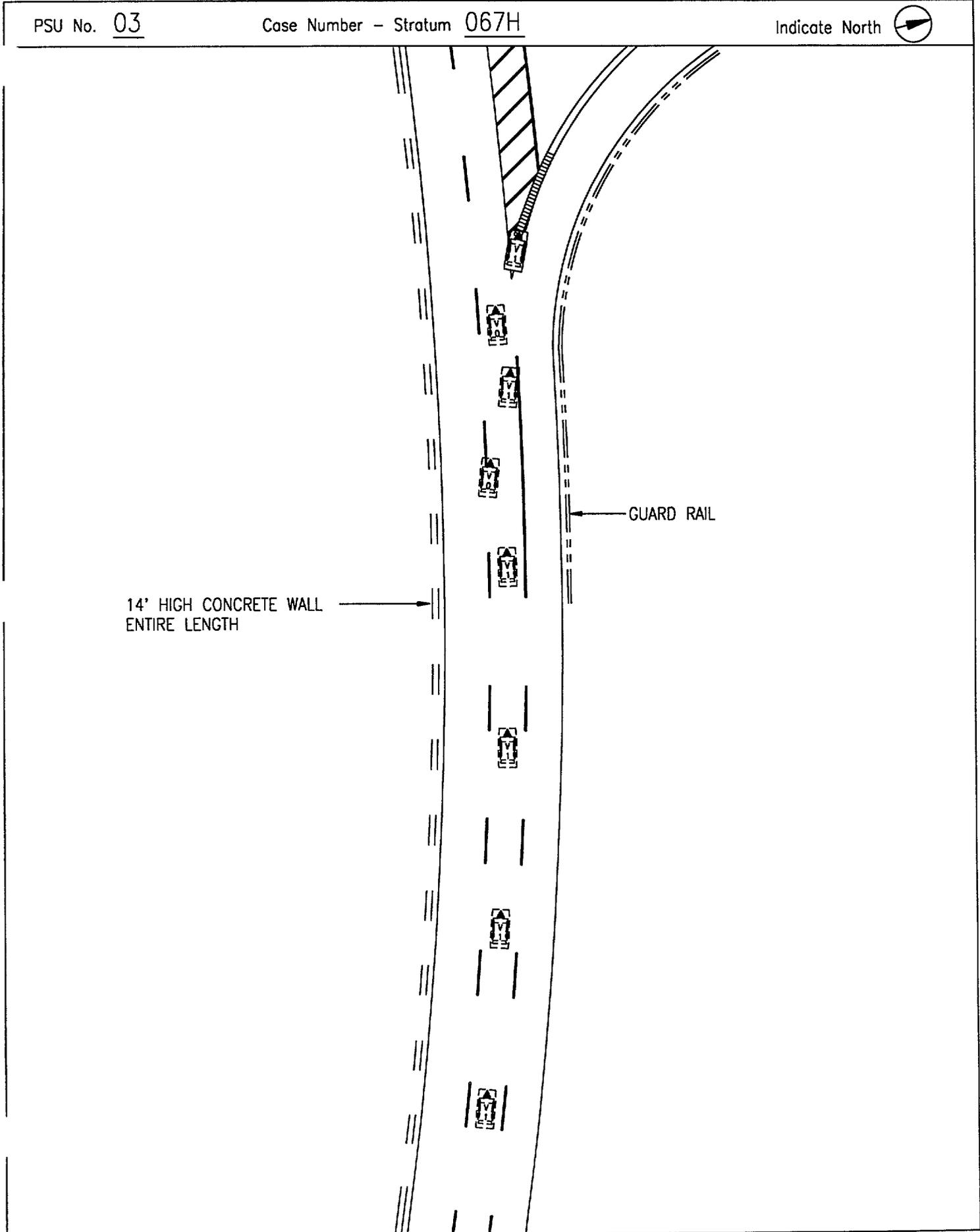
The subject vehicle was traveling in the first westbound travel lane of an urban, four-lane, divided, asphalt roadway (five lanes with exit ramp) during daylight and raining conditions. The roadway had a negative slope and curved to the left. The driver stated that a non-contact truck traveling in the second westbound lane passed the vehicle and then pulled into the first westbound lane, cutting off the subject vehicle. The subject driver apparently steered to the right to avoid contact with the truck traveling in the same direction. The subject vehicle exited the roadway to the right and struck the terminal end of a Fitch energy absorbing barrier treatment located in the gore area between the travel lanes and exit ramp.

ACCIDENT COLLISION DIAGRAM

PSU No. 03

Case Number - Stratum 067H

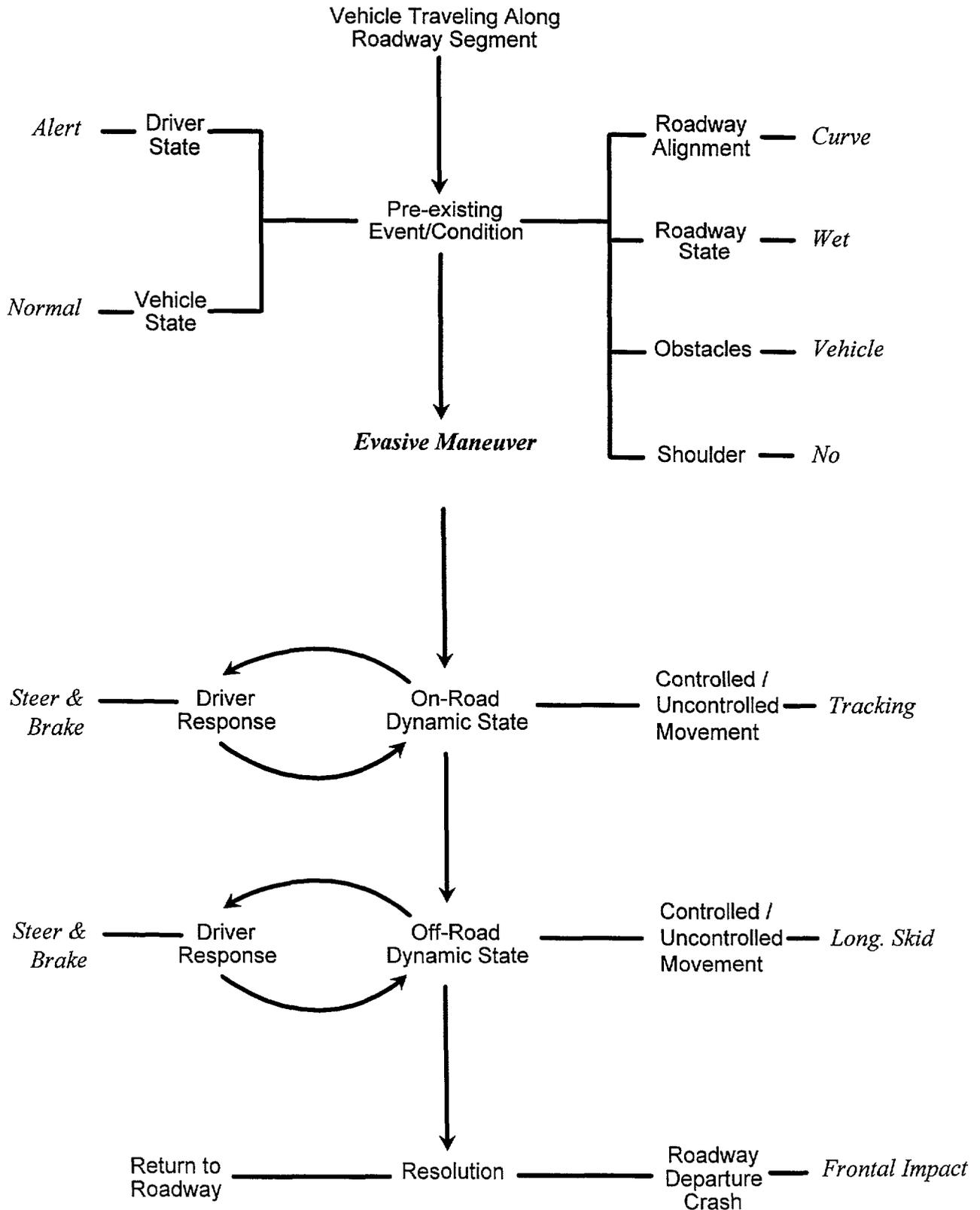
Indicate North 



14' HIGH CONCRETE WALL
ENTIRE LENGTH

GUARD RAIL

Vehicle Dynamic Scenario



CAUSAL FACTOR: Evasive Maneuver - Avoid Animal or Pedestrian
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	1-6-93	Weather:	Clear/Cloudy
Time:	7003	Surface Condition:	Wet
Accident Type:	Avoid Collision	Lighting:	Daylight
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	56	Year:	1990
Driver Sex:	Female	Vehicle Make:	Acura
Impairment:	None	Vehicle Model:	Integra
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Straight
No. of Lanes:	3	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	09 Braking and steering right		
GV64:	01 Going straight		
GV65:	87 Animal in roadway		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Avoid Animal or Pedestrian*

ROADSIDE DEPARTURE: *Right*

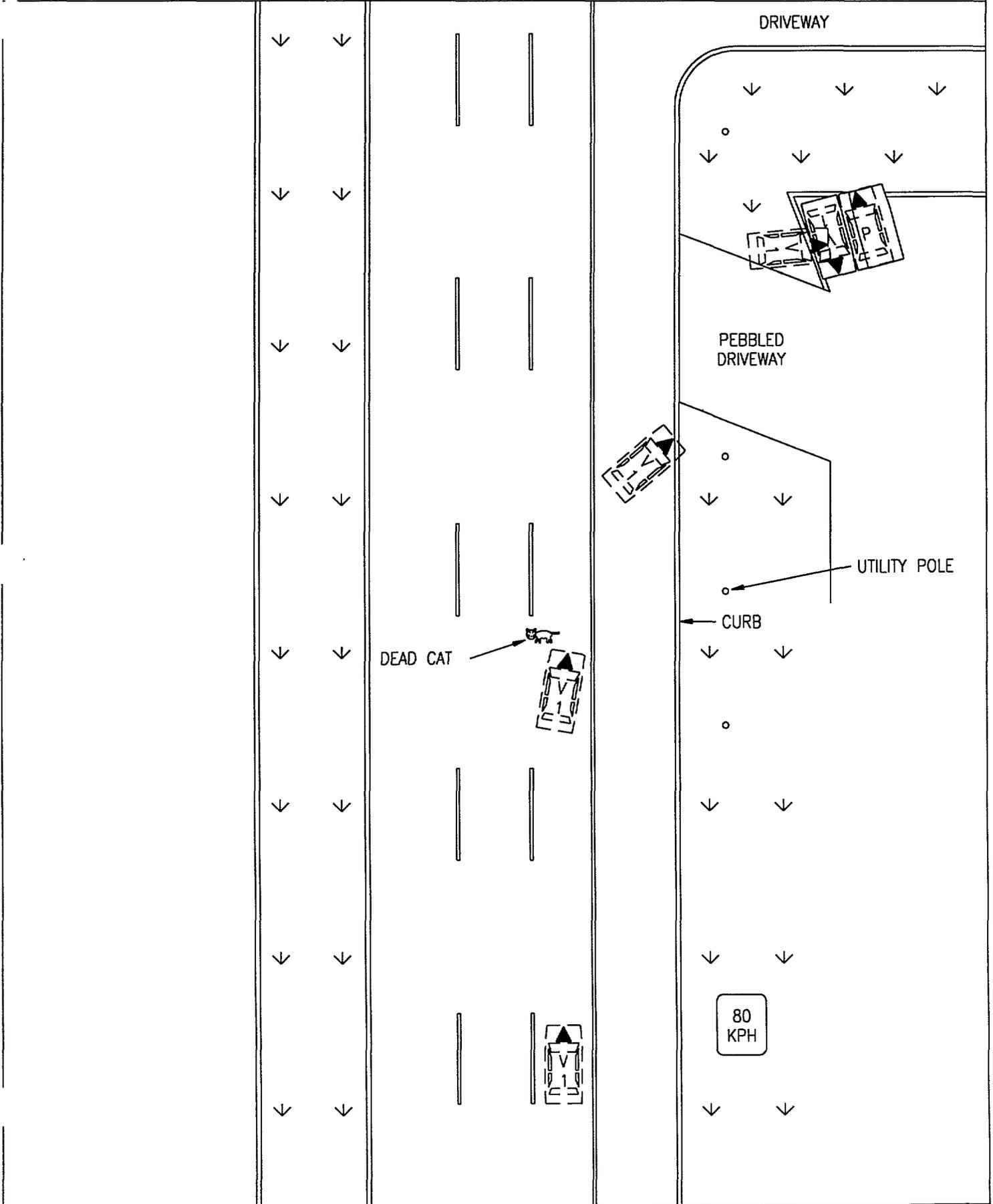
The subject vehicle was traveling in the outboard lane of a wet, straight, level, divided, asphalt roadway. The driver was traveling at an estimated speed of 72 km/h (45 mph) approaching a left curve. Prior to the curve, the driver swerved to avoid striking a dead animal in the travel lane. The vehicle broke traction on the wet road surface and yawed in a clockwise direction. The vehicle mounted the right barrier curb and traversed a grassy lawn area as it continued to rotate in a clockwise direction. The left side of the vehicle impacted a parked vehicle at an auto dealer's lot. Evasive action to avoid an animal was the primary causal factor.

ACCIDENT COLLISION DIAGRAM

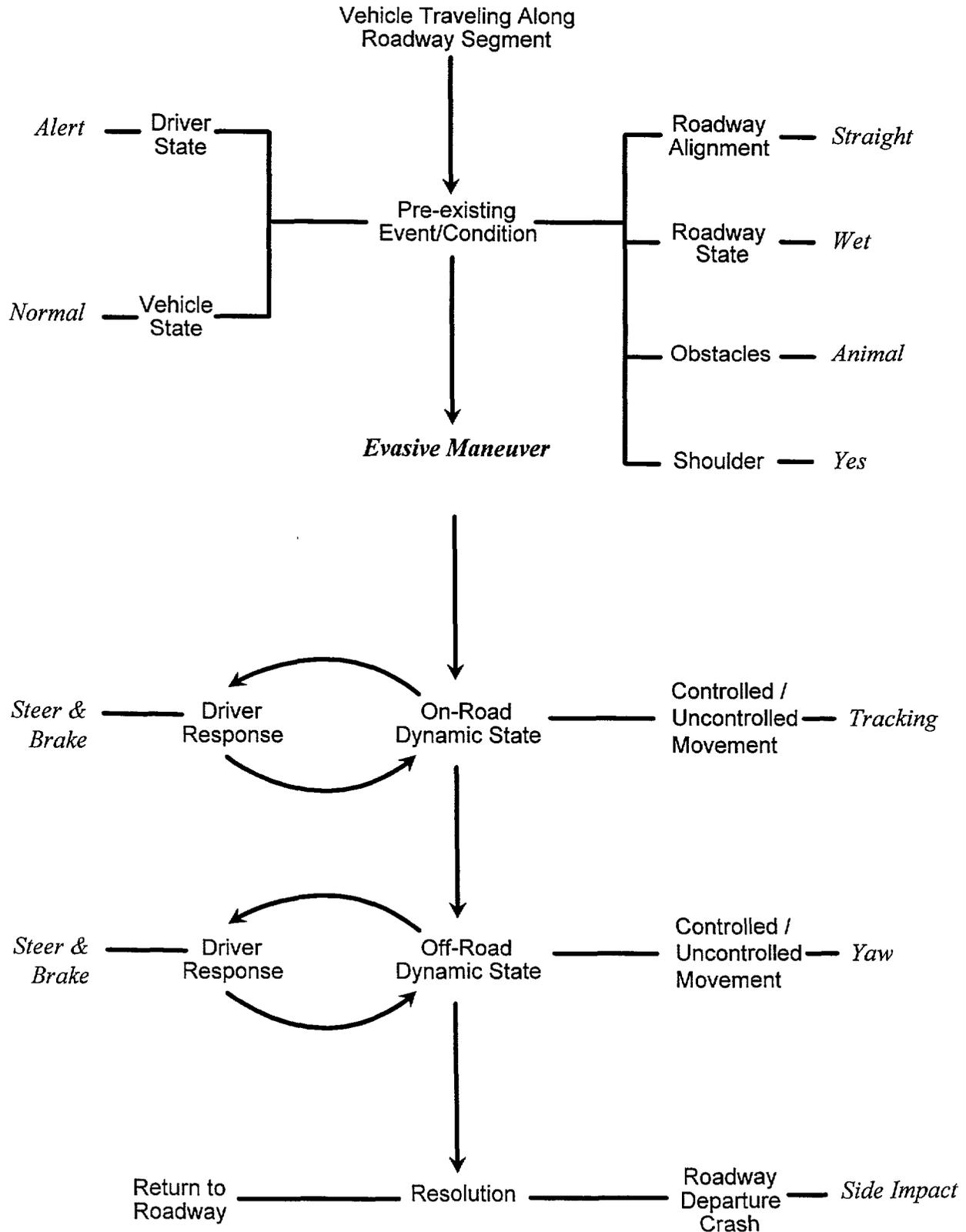
PSU No. 04

Case Number - Stratum 005E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction

ROADSIDE DEPARTURE: Left

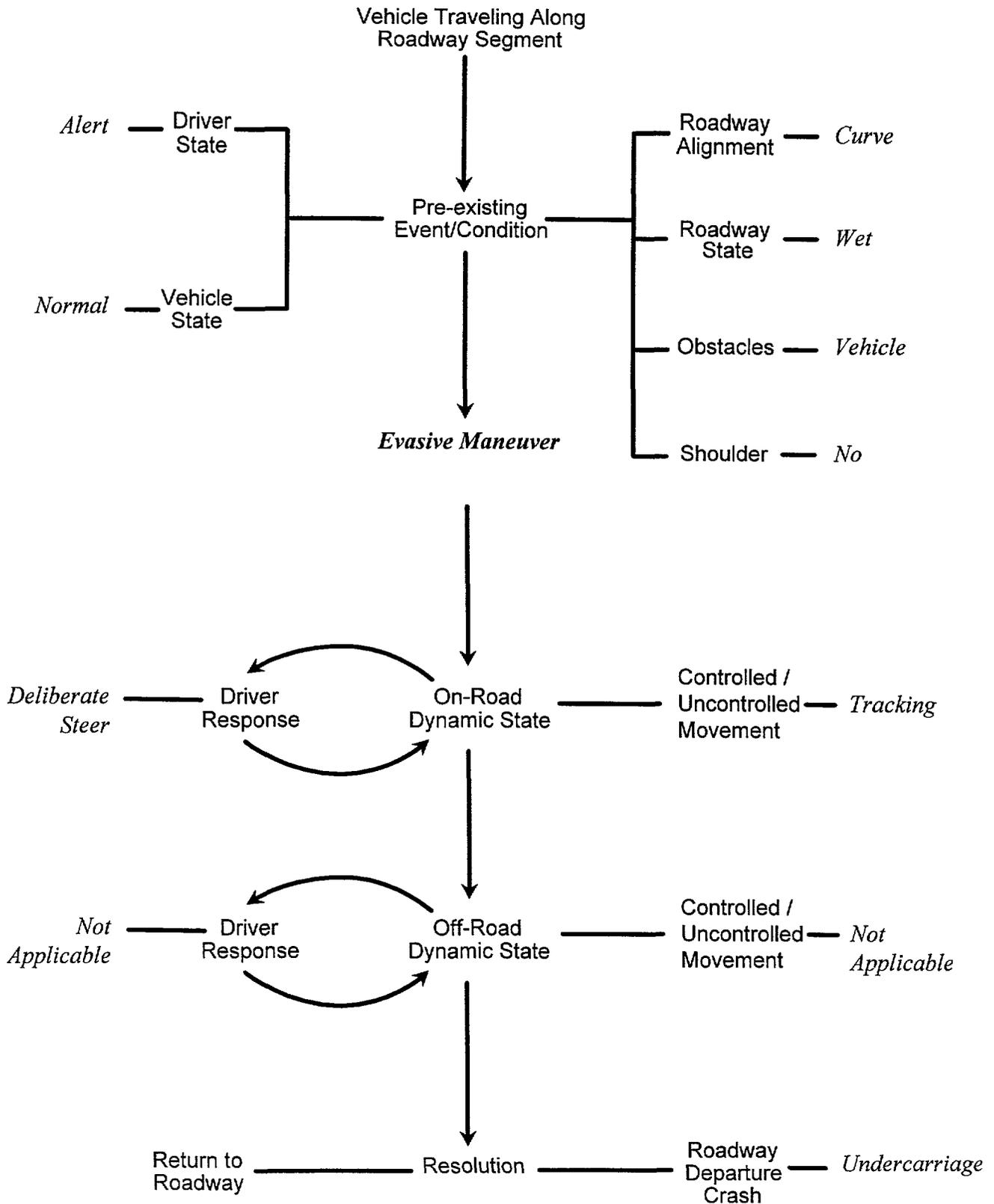
General Accident Information			
Date:	1-4-93	Weather:	Rain
Time:	1553	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	34	Year:	1990
Driver Sex:	Male	Vehicle Make:	Nissan/Datsun
Impairment:	None	Vehicle Model:	Z-car, ZX
Familiarity with Road:	Unknown	ABS:	Yes
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Left
No. of Lanes:	3	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	03 Starting in traffic lane		
GV65:	15 This vehicle turning left at intersection		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

The subject vehicle was initiating a left turn from a jug handle onto a divided roadway at a signalized intersection. As the driver accelerated in the center of three lanes, a non-contact vehicle ran the red signal phase and encroached into the subject vehicle's path of travel. The subject driver steered in a counterclockwise direction to avoid the non-contact vehicle and departed the inboard road edge. The subject vehicle impacted and drove over a 20 cm high barrier curb before coming to rest on the grass median. The causal factor was evasive action to avoid impact with an encroaching vehicle that was traveling in the same westerly direction.

Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Inattention*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	1-1-93	Weather	Clear/Cloudy
Time:	1629	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	44	Year:	1991
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Cavalier
Familiarity with Road:	Yes	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	6	Slope:	Level
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	99 Unknown		
G V64:	0 1 Going straight		
GV65:	09 This vehicle loss of control due to unknown		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

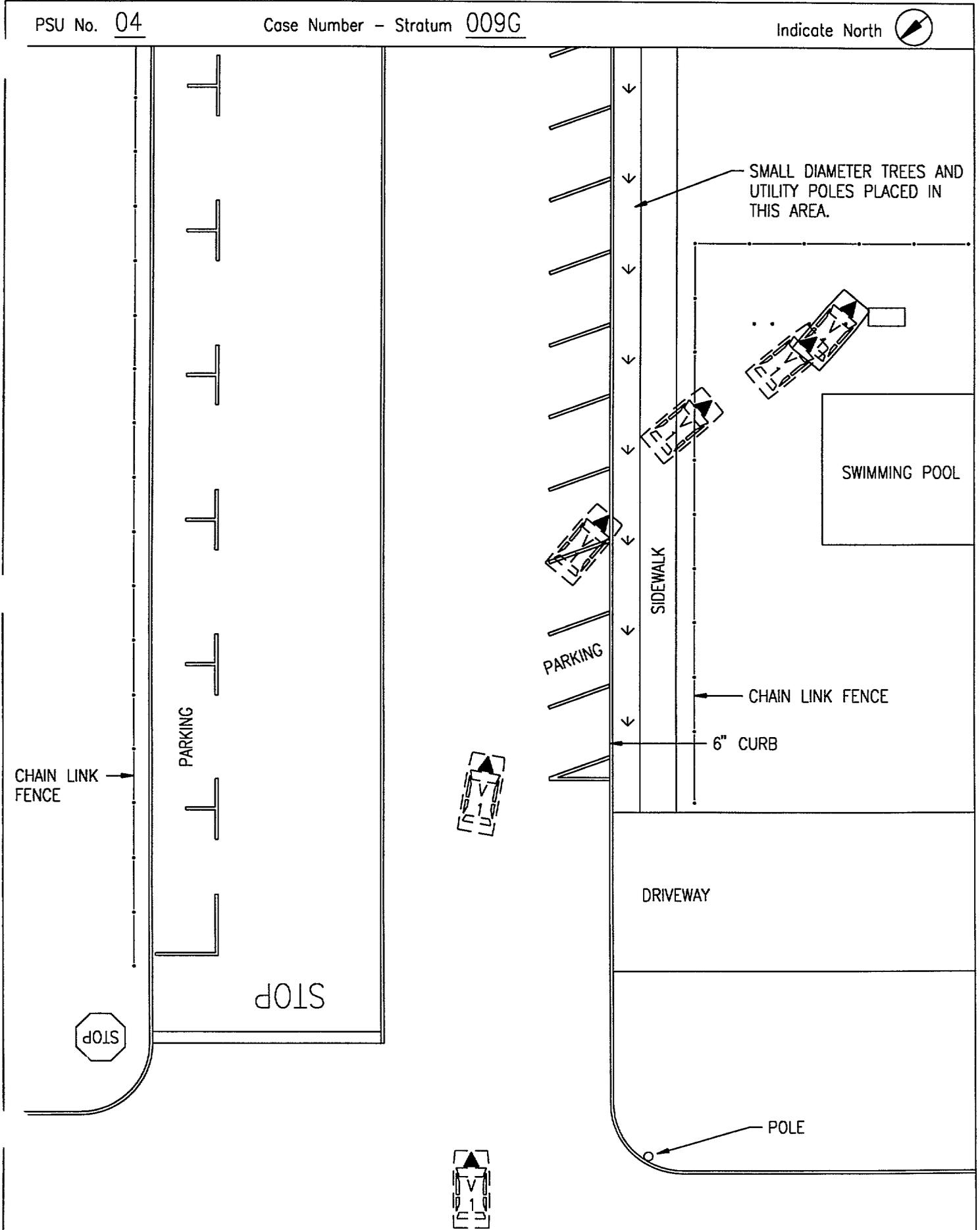
The subject vehicle was traveling in a southeasterly direction on a straight and level asphalt road surface during daylight hours. The driver was inattentive and allowed the vehicle to drift to the right and depart the right curb line. The vehicle drove over the barrier curb and impacted a chain-link fence. The vehicle penetrated the fence and came to rest against a building. There were multiple roadside obstacles adjacent to each curb line including small diameter trees, utility poles, and a chain-link fence. The posted speed limit was 40 km/h (25 mph).

ACCIDENT COLLISION DIAGRAM

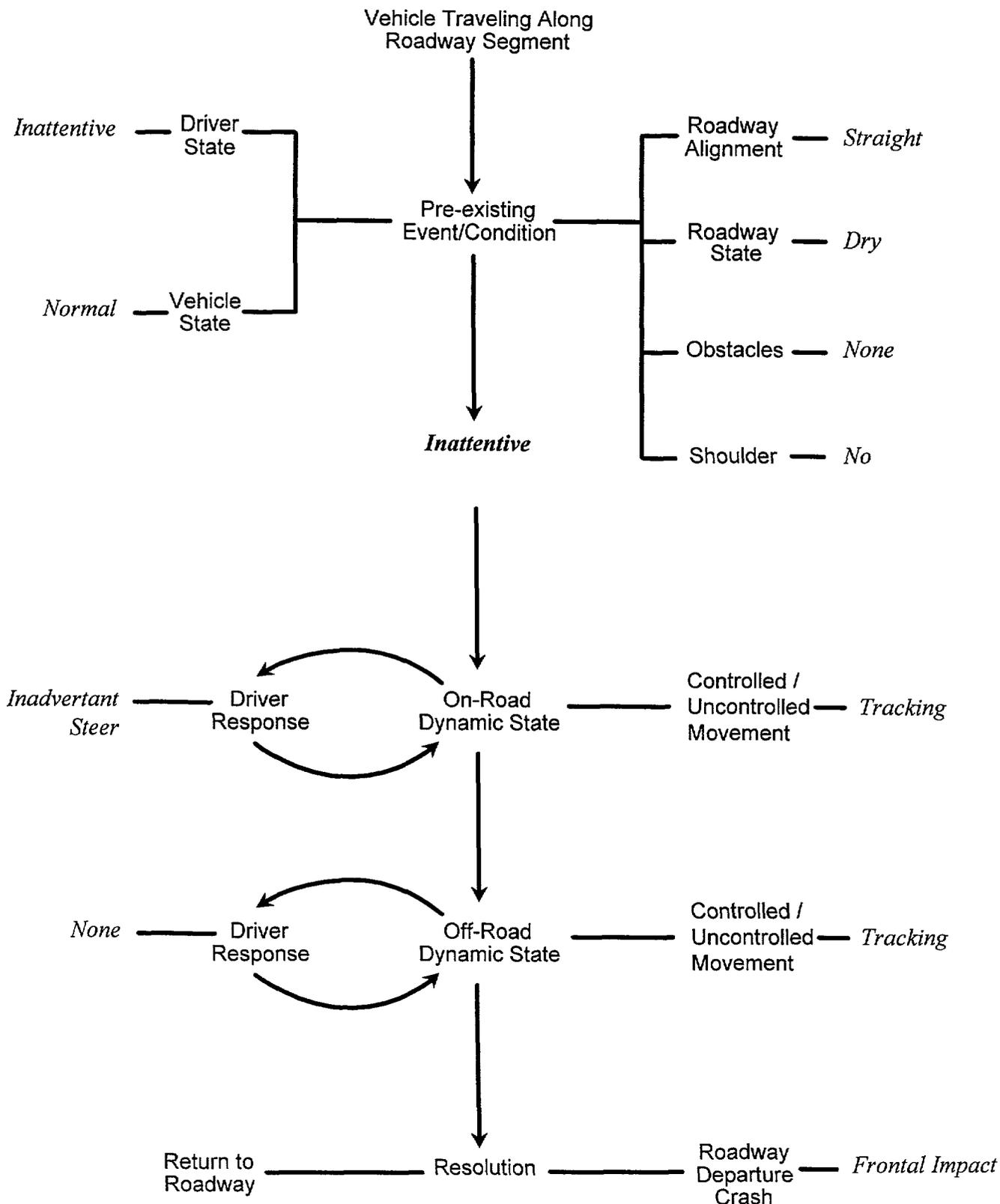
PSU No. 04

Case Number - Stratum 009G

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Excessive

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	1-5-93	Weather:	Clear/Cloudy
Time:	Unknown	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	27	Year:	1989
Driver Sex:	Female	Vehicle Make:	Mazda
Impairment:	None	Vehicle Model:	626
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Right
No. of Lanes:	3	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	03 Braking (lockup)		
GV64:	13 Negotiating a curve		
GV65:	06 This vehicle loss of control due to traveling too fast for conditions		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: *Left*

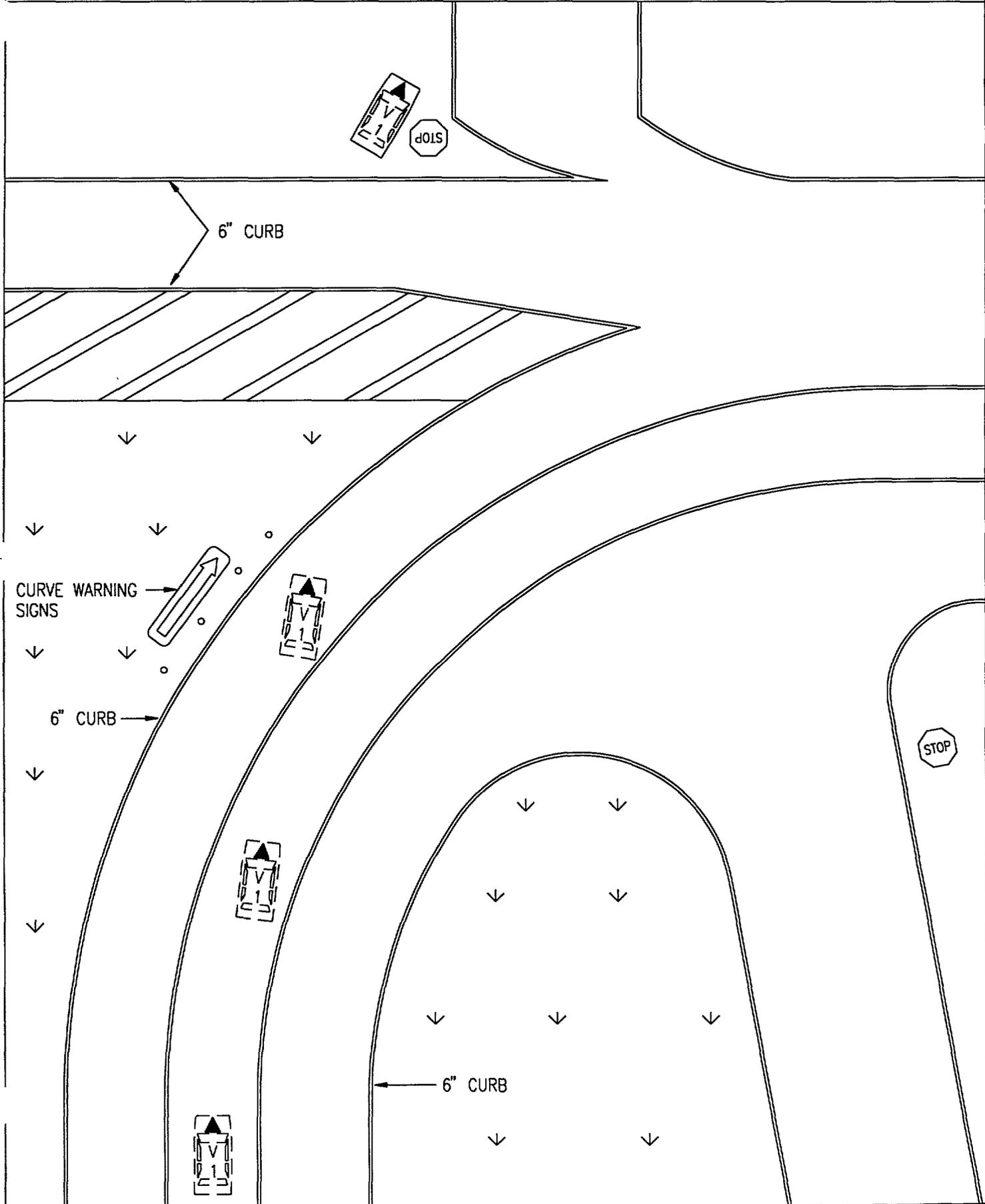
The subject vehicle was traveling in an easterly direction in a divided three-lane roadway that curved sharply to the right. Both edges of the road were bordered by 15 cm barrier curbs. The driver entered the curve at an excessive rate of speed and drifted from the center lane across the left inboard lane. The driver braked with sufficient force to lock the front wheels of the vehicle causing it to skid in a tracking mode across the median and across another intersecting roadway. The vehicle drove over several barrier curbs before coming to rest.

ACCIDENT COLLISION DIAGRAM

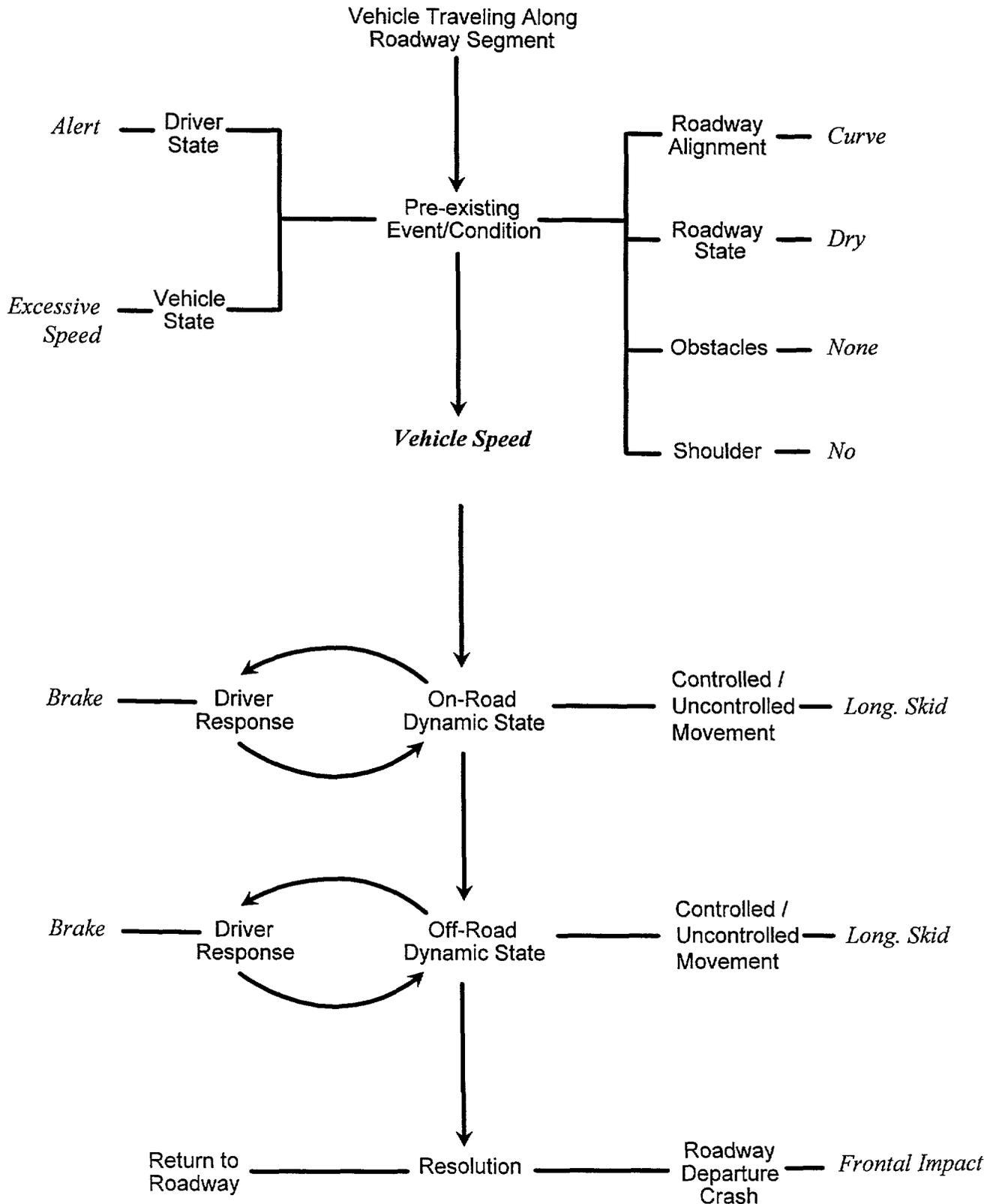
PSU No. 04

Case Number - Stratum 013G

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Physical (seizure/passed out)*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	1625	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	39	Year:	1980
Driver Sex:	Male	Vehicle Make:	Pontiac
Impairment:	Physical (seizure/passed out)	Vehicle Model:	Sunbird
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	08	This vehicle loss of control due to other	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Physical
(seizure/passed out)*

ROADSIDE DEPARTURE: *Right*

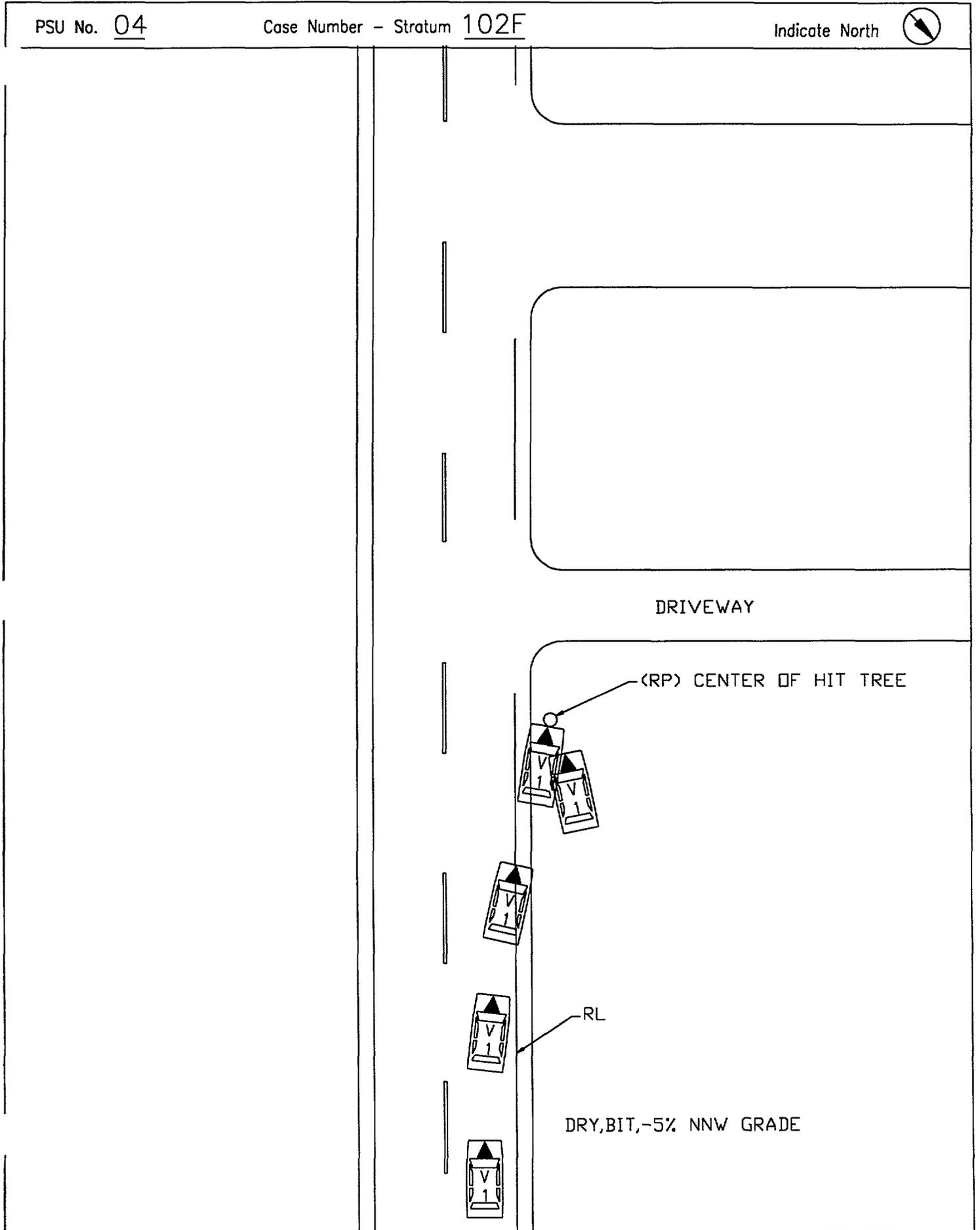
The subject vehicle was traveling in a southwesterly direction on a straight and level two-lane asphalt road when the driver suffered a diabetic seizure. The vehicle drifted off the right road edge in a tracking mode leaving a rotating tire mark on the grass. The center frontal area of the vehicle impacted a large diameter tree resulting in a 24 km/h (15 mph) Delta V. The posted speed limit was 56 km/h (35 mph). Narrow paved shoulders bordered the travel lanes with grass and trees adjacent to the shoulders. The edge lines and center lines were in poor condition and there were no reflective delineators.

ACCIDENT COLLISION DIAGRAM

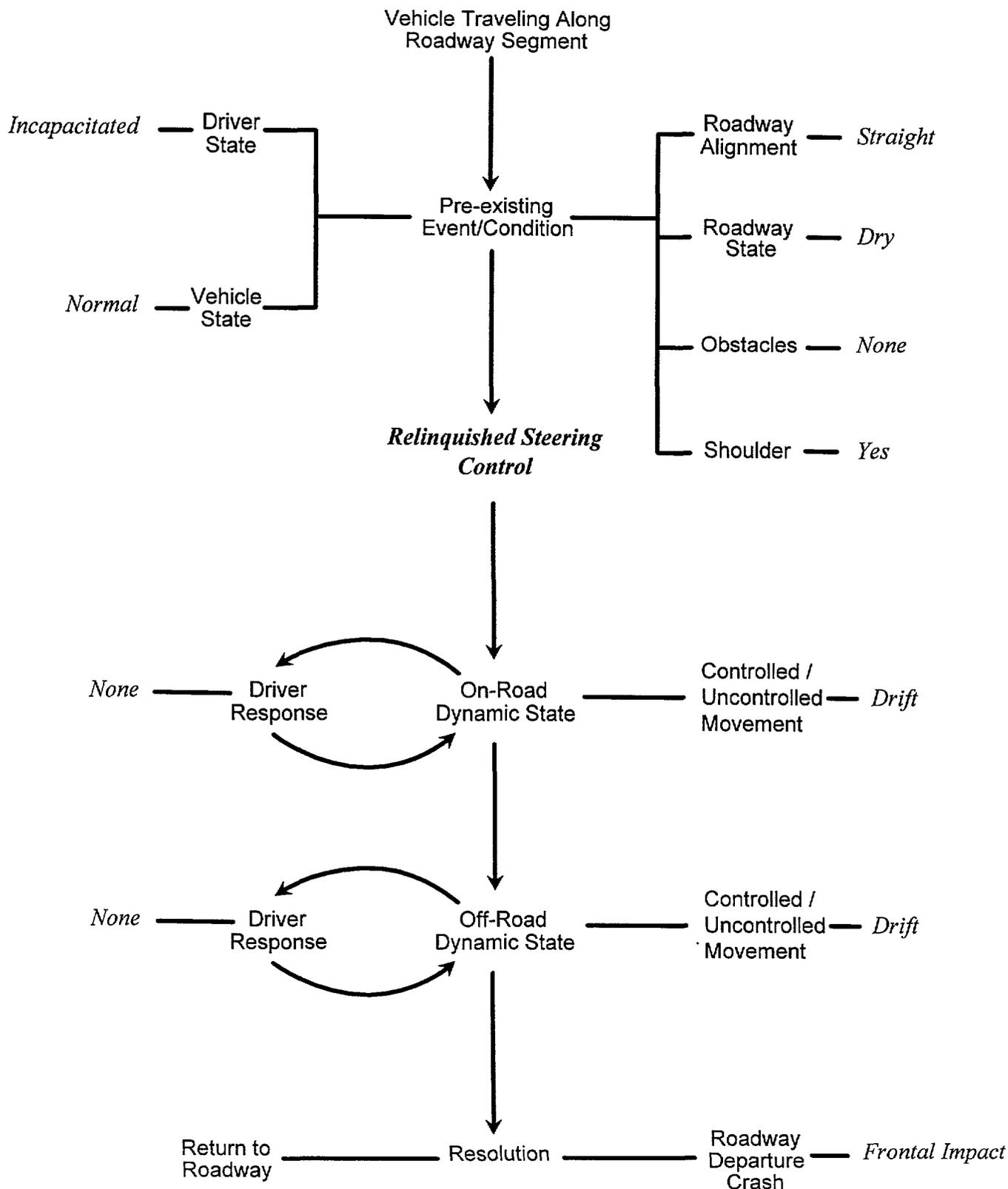
PSU No. 04

Case Number - Stratum 102F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Other*
ROADSIDE DEPARTURE: *Left*

General Accident information			
Date:	7-4-93	Weather:	Clear/Cloudy
Time:	0058	Surface Condition:	<i>Dry</i>
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Urban
Driver/Occupant Information		Vehicle information	
Driver Age:	17	Year:	1991
Driver Sex:	Male	Vehicle Make:	Jeep
Impairment:	<i>None</i>	Vehicle Model:	YJ Series
Familiarity with Road:	Yes	ABS:	No
No. of Occupants:	4	Defects:	<i>No</i>
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	3	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	08 Braking and steering left		
GV64:	0 1 Going straight		
GV65:	08 This vehicle loss of control due to other		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Other*

ROADSIDE DEPARTURE: *Left*

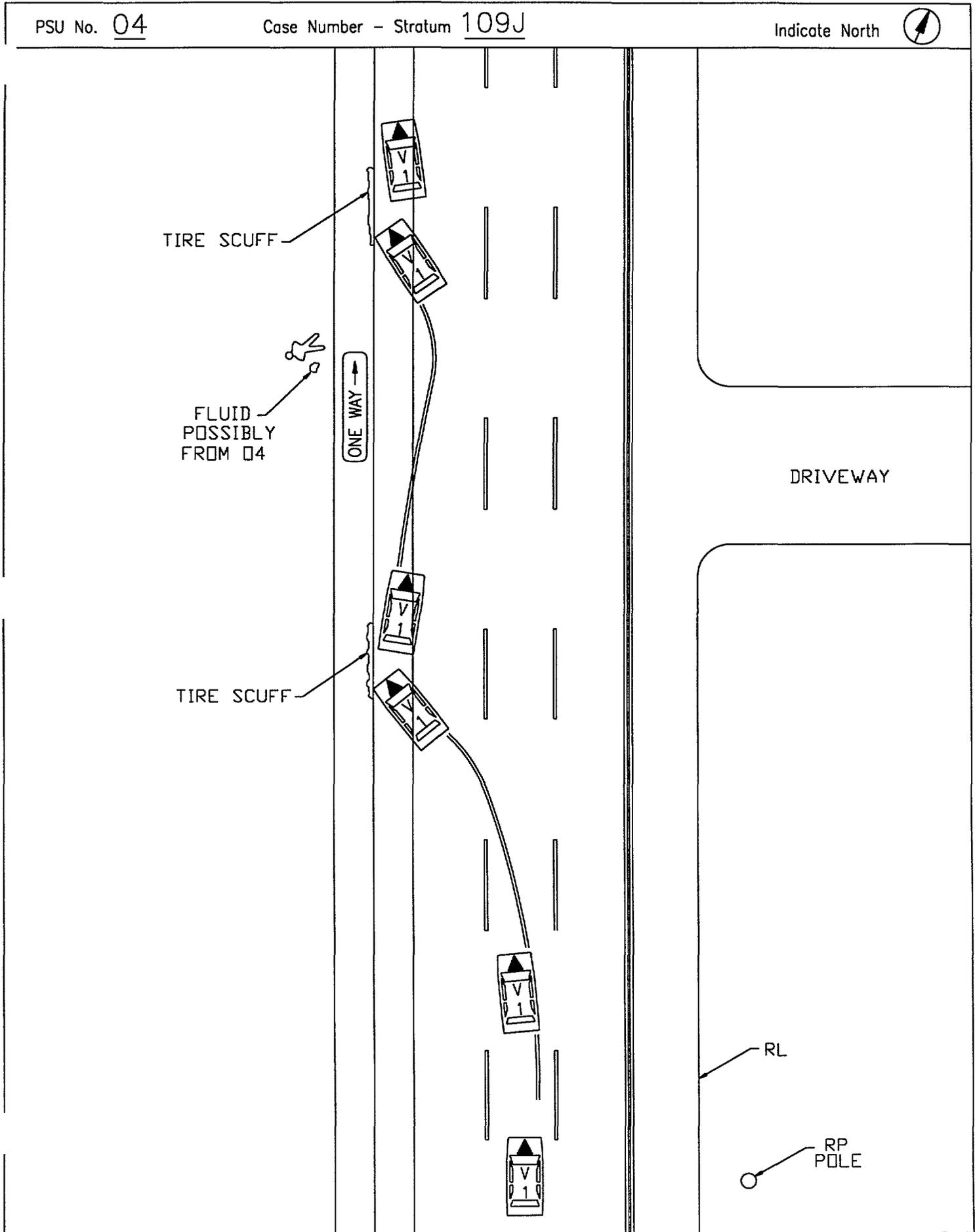
The subject vehicle was traveling in a westerly direction on a dry, six-lane, divided, asphalt roadway in a 80 km/h (50 mph) speed zone. The vehicle was traveling in the center westbound lane at a driver estimated speed of 56 km/h (35 mph). The right rear occupant reached forward and hit the driver in the eye which caused the driver to lose control of the vehicle. The vehicle yawed in a counterclockwise direction across the paved shoulder of the inboard travel lane. The left front area of the vehicle impacted a concrete jersey median barrier. The vehicle was redirected in a clockwise direction and traveled along the inboard shoulder, contacting the barrier again before coming to rest, facing west. The road surface was clearly marked with broken white lane lines and solid painted edge lines. There were no reflective roadside delineators or markers.

ACCIDENT COLLISION DIAGRAM

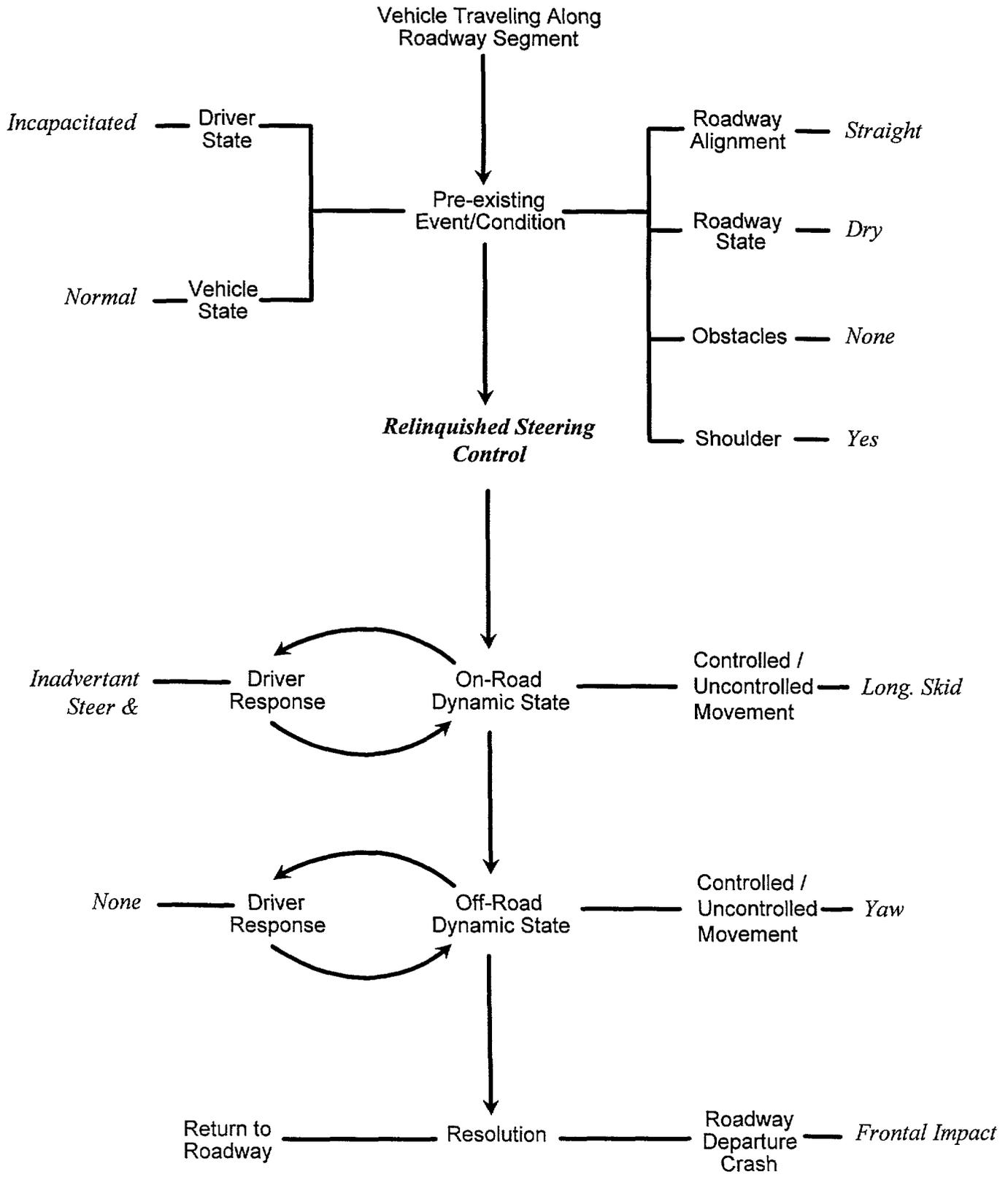
PSU No. 04

Case Number - Stratum 109J

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Failure

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	8-6-93	Weather	Clear
Time:	1341	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	17	Year:	1987
Driver Sex:	Female	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Escort/EXP
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	Engine Stall
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Right
No. of Lanes:	4	Slope:	Grade
		Speed Limit:	32 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	13 Negotiating a curve		
GV65:	02 This vehicle loss of control due to stalled engine		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Vehicle Failure*

ROADSIDE DEPARTURE: *Left*

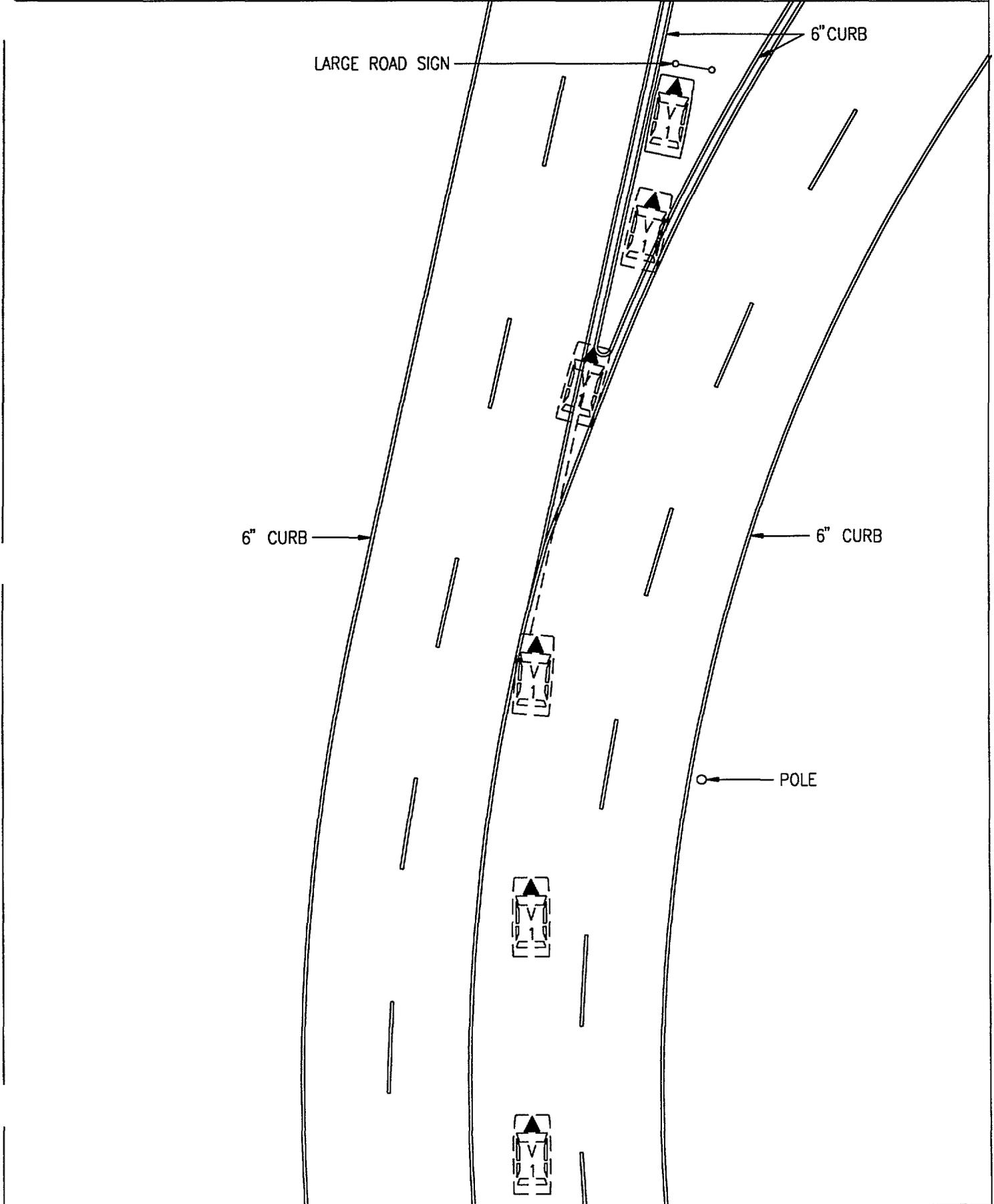
The subject driver was attempting to negotiate a right curve on a four-lane, one-way road that separated into a Y-configuration. As the vehicle approached the junction, the engine stalled and the driver was unable to steer the vehicle through the curve. The vehicle impacted the barrier curb at the island area with the right front tire and skidded to a stop on the grassy surface. There was no evidence of pre-impact braking, however, the driver braked during or after the impact. The asphalt road surface was dry and open and afforded the driver a clear line of sight. All road markings were in good condition and there were no roadside reflective markers/delineators.

ACCIDENT COLLISION DIAGRAM

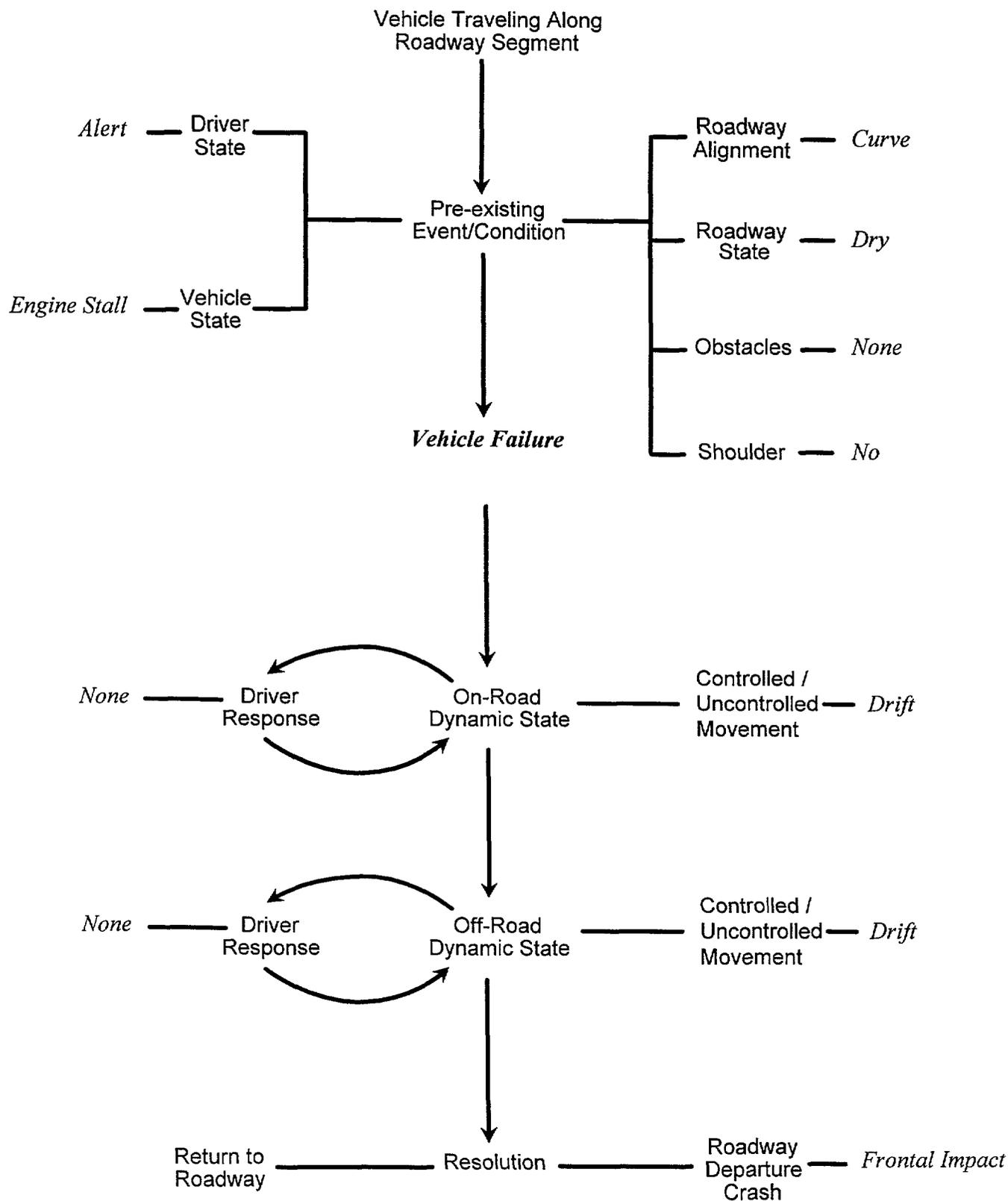
PSU No. 04

Case Number - Stratum 116H

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Evasive Maneuver - Avoid Animal or Pedestrian
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	8-2-93	Weather:	Clear/Cloudy
Time:	2341	Surface Condition:	Dry
Accident Type:	Avoid Collision	Lighting:	Artificial lighting
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	27	Year:	1988
Driver Sex:	Male	Vehicle Make:	Pontiac
Impairment:	None	Vehicle Model:	Firebird/ Trans Am
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type [Median]:	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	64 km/h
Cluster Variables			
GV14:	03 Braking (lockup)		
GV64:	0 1 Going straight		
GV65:	87 Animal in roadway		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Avoid Animal or Pedestrian*

ROADSIDE DEPARTURE: *Right*

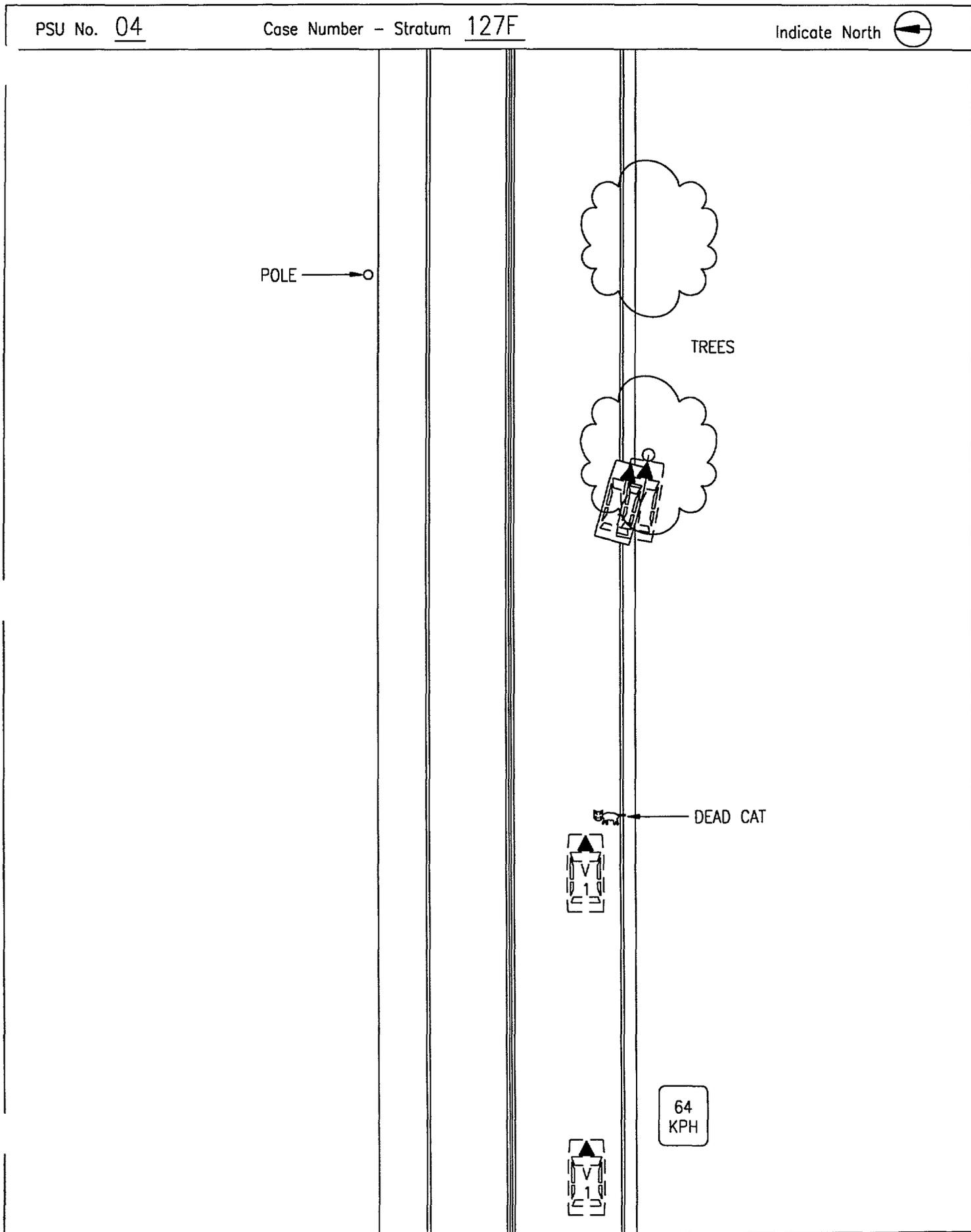
The subject vehicle was traveling on an dry, straight, level, urban, asphalt roadway that decreased from four lanes to two lanes in a 64 km/h (40 mph) speed zone. The road was dark but lighted and the driver was traveling within the speed limit when a small animal entered the travel lane. The driver swerved to the right and braked in an attempt to avoid the animal. The vehicle skidded in a tracking orientation off the right road edge and the right frontal area of the vehicle impacted a large diameter tree. Approximately 17 m of right front skid marks and 8 m of left front skid marks were documented. The vehicle was traveling at 63.3 km/h (39.3 mph), based on a calculated Delta V of 17 km/h (11 mph) and measured skid distance. Both edges of the roadway were bordered by large diameter trees which limited the driver's escape routes. The solid white edge lines and the double yellow center lines were in good condition, however, there were no reflective markers or delineators.

ACCIDENT COLLISION DIAGRAM

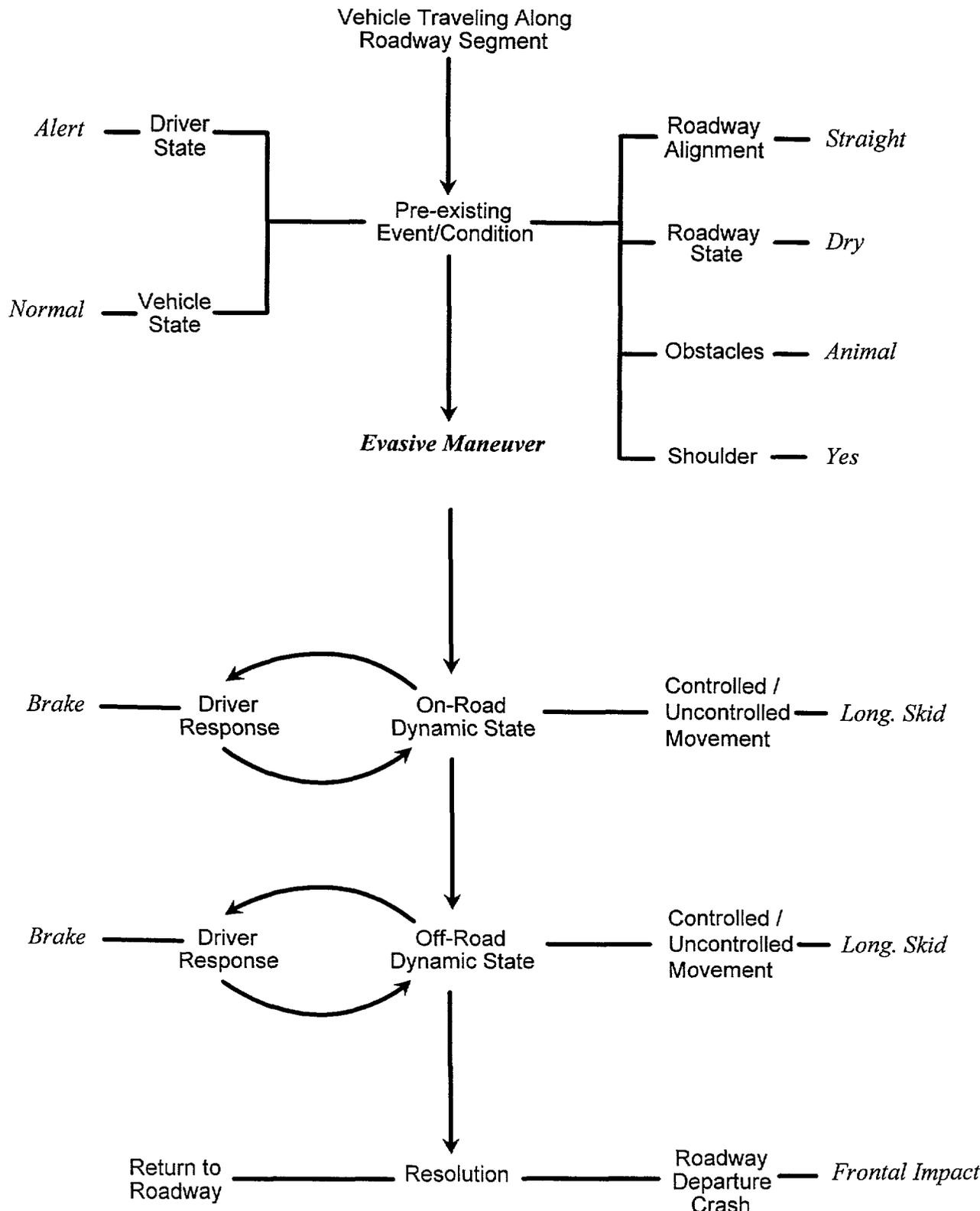
PSU No. 04

Case Number - Stratum 127F

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Lost Directional Control*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	2-7-93	Weather	Snow/Sleet/Hail
Time:	1037	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	32	Year:	1984
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Celebrity
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	4	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	5	Slope:	Level
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	07 Steering right		
GV64:	0 I Going straight		
GV65:	05 This vehicle loss of control due to poor road conditions		
GV66:	3 Skidding laterally - clockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Lost Directional Control*
ROADSIDE DEPARTURE: *Right*

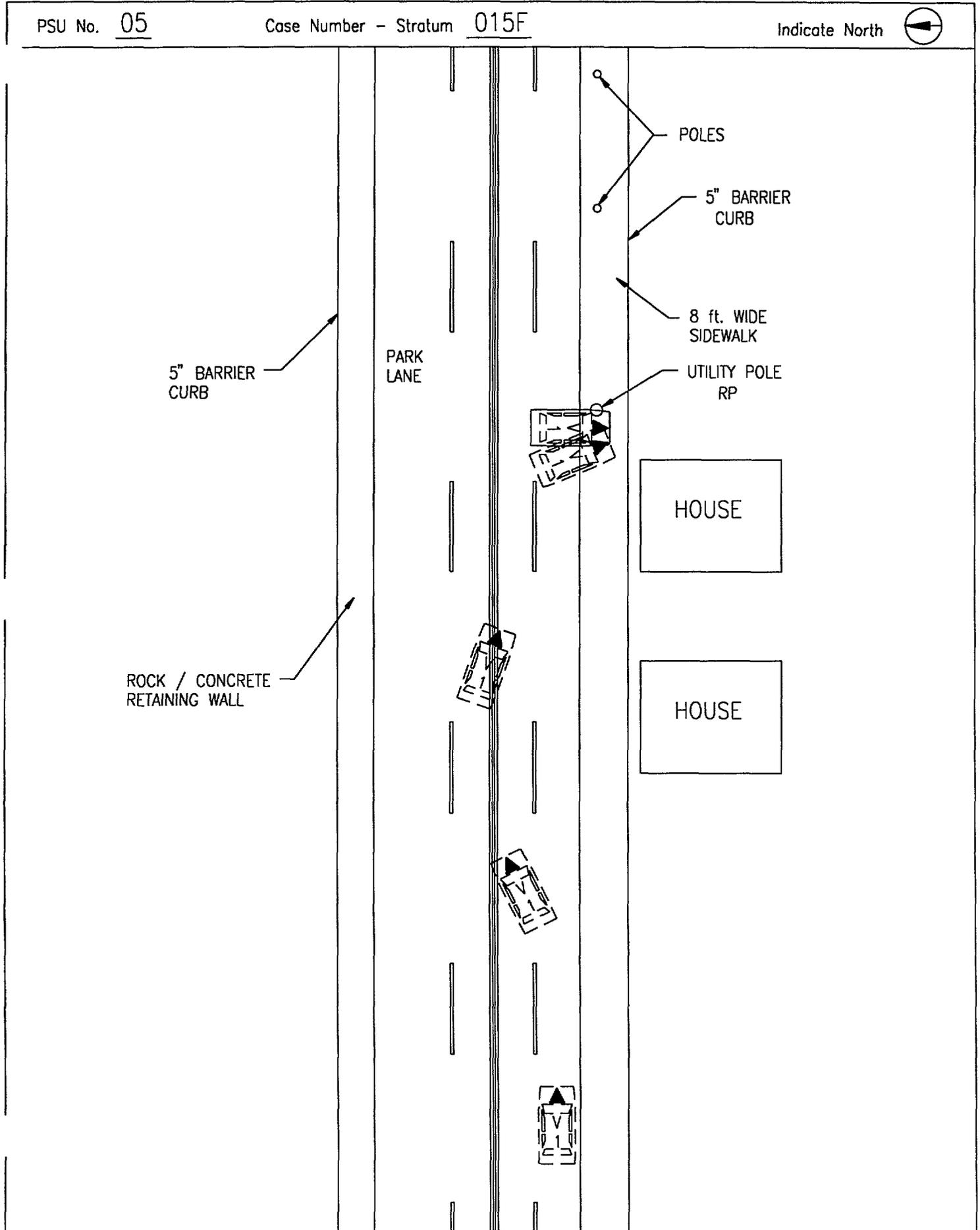
The subject vehicle was traveling in the outboard lane of a snow- and ice-covered, straight, level, five-lane undivided, asphalt roadway at a driver estimated speed of 32-48 km/h (20-30 mph). The driver lost control of the vehicle when it overrode the ice which initiated a clockwise yaw. The vehicle departed the right road edge in a near broadside orientation and impacted a utility pole with the left front fender area.

ACCIDENT COLLISION DIAGRAM

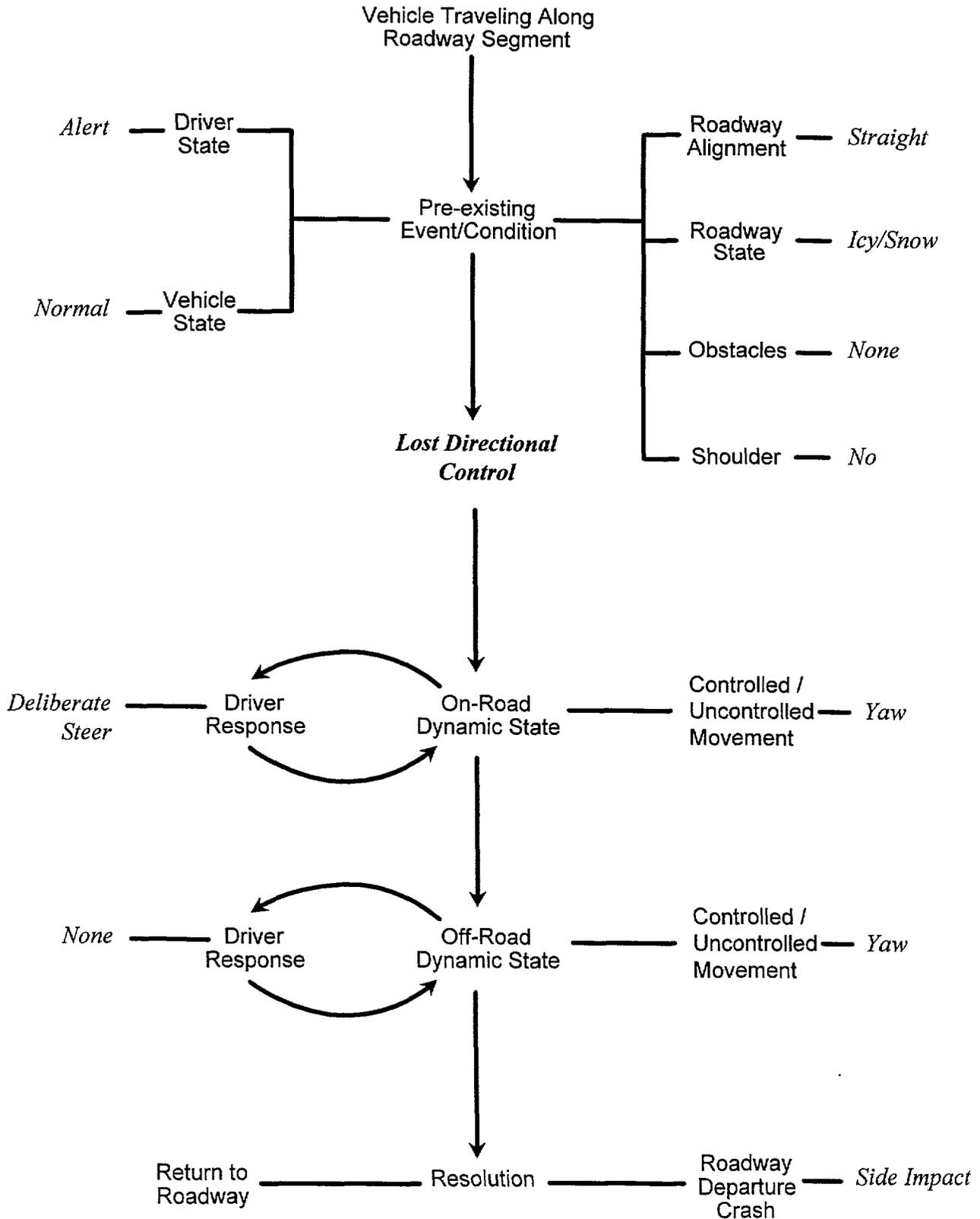
PSU No. 05

Case Number - Stratum 015F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Unsafe Driving Act

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	2-1-93	Weather:	Snow/Sleet/Hail
Time:	1610	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	48	Year:	1985
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Tempo
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	05	This vehicle loss of control due to poor road conditions	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Vehicle Speed - Unsafe Driving Act*
ROADSIDE DEPARTURE: *Left*

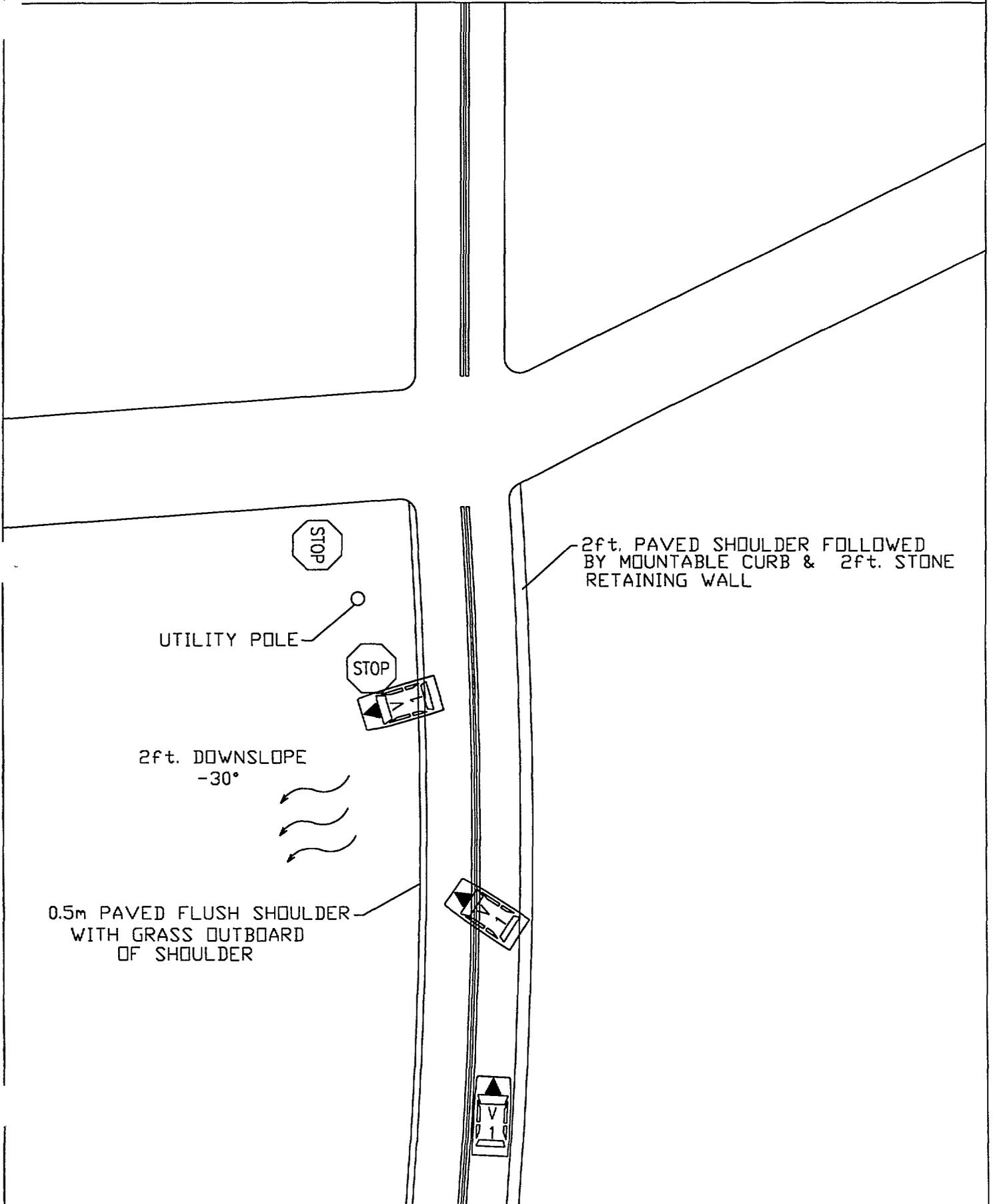
The subject vehicle was traveling in a southerly direction on a snow-covered, two-lane asphalt roadway that curved slightly to the left with an estimated +2% slope. The driver estimated the vehicle's travel speed at 72 km/h (45 mph). The vehicle broke traction on the icy surface and rotated in a counterclockwise direction. The vehicle departed the left road edge and impacted a speed limit sign with the right front side area. The vehicle continued in a broadside orientation onto an intersecting street where it came to rest. The causal factor was an unsafe driving act with excessive speed on a snow-covered road surface.

ACCIDENT COLLISION DIAGRAM

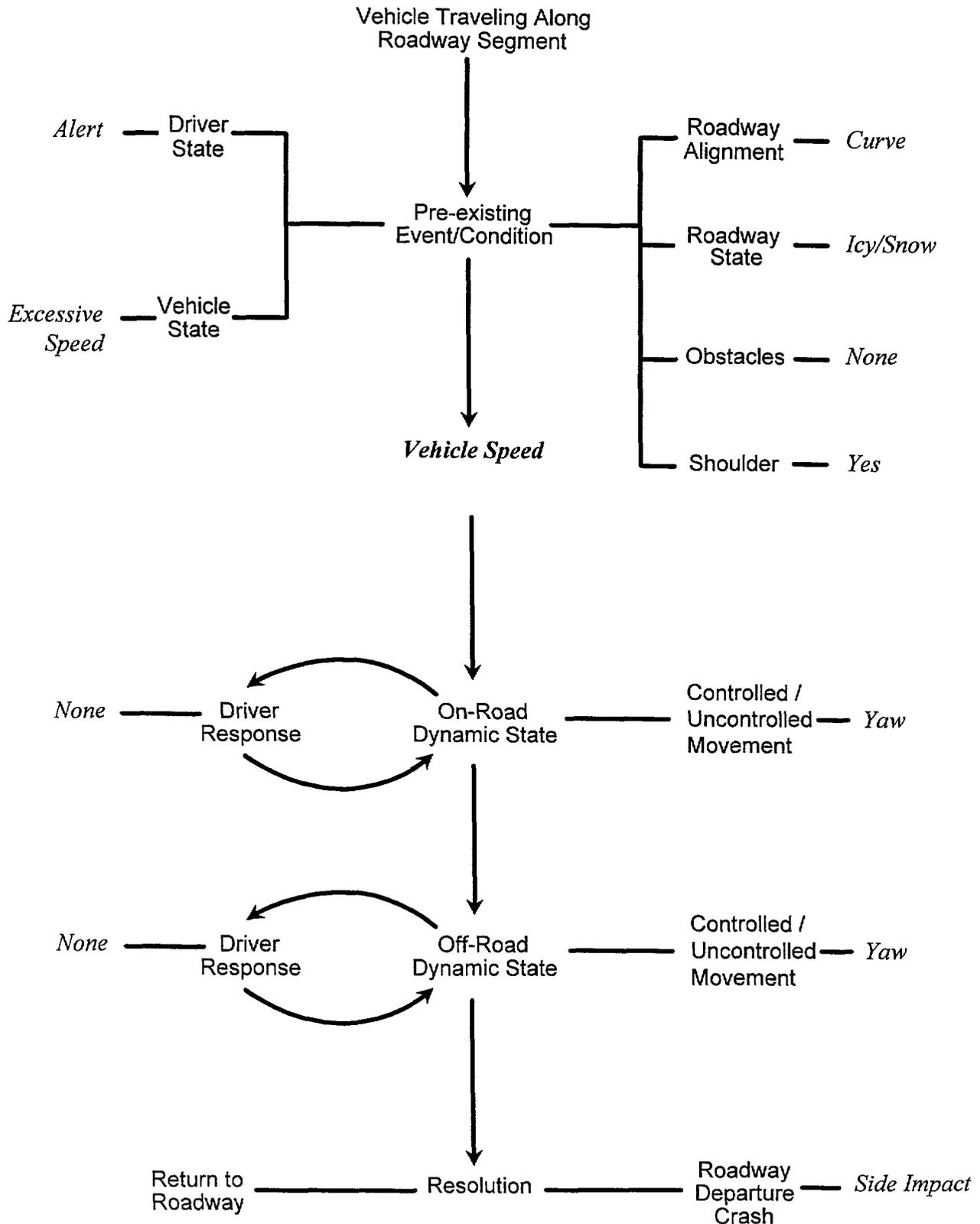
PSU No. 05

Case Number - Stratum 030H

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Excessive
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	3-5-93	Weather:	Clear/Cloudy
Time:	2058	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	1 (C)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	19	Year:	1990
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Taurus
Familiarity with Road:	Unknown	ABS:	NO
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Level
		Speed Limit:	64 km/h
Cluster Variables			
GV14:	03 Braking (lockup)		
GV64:	13 Negotiating a curve		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: **Left**

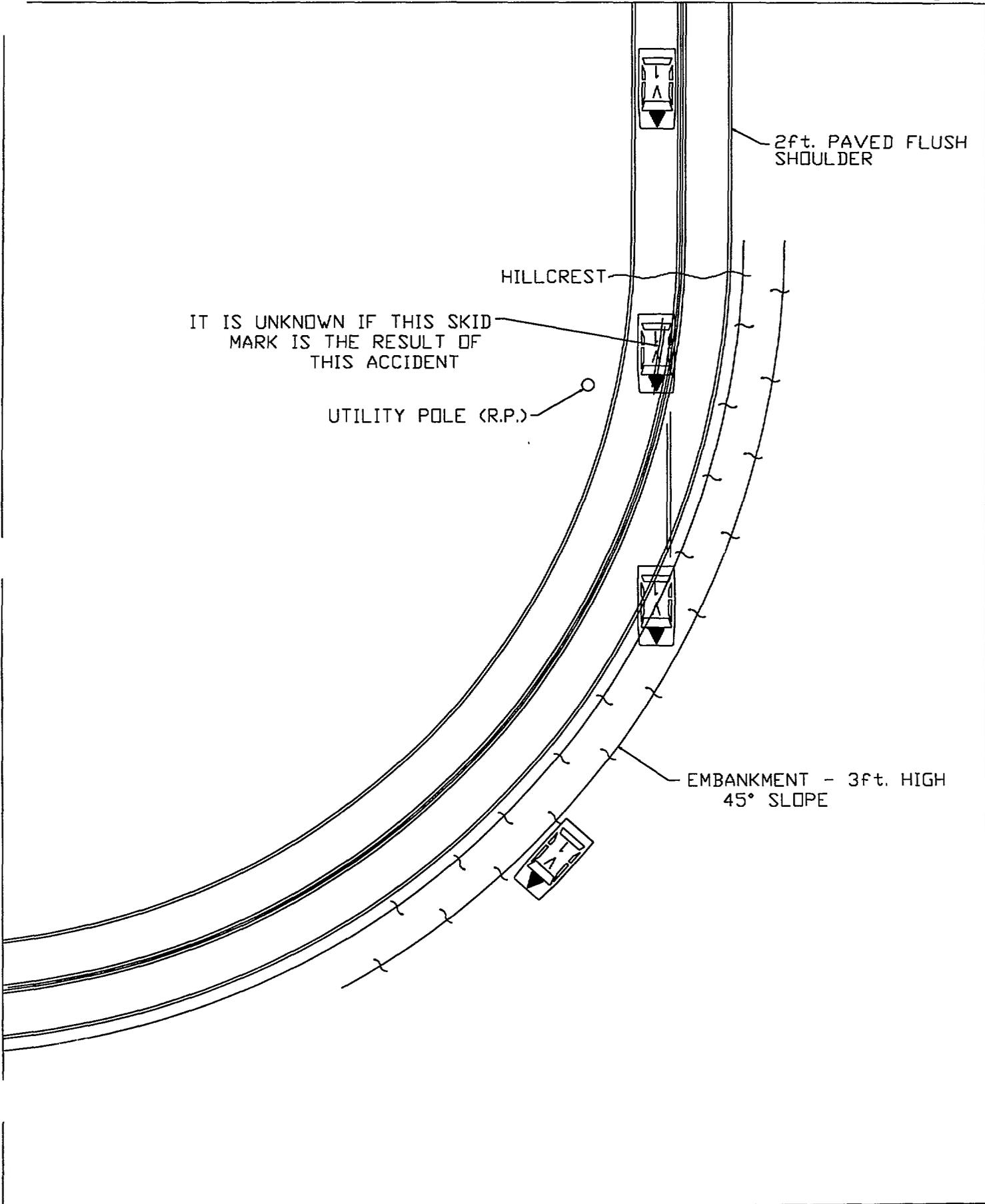
The subject vehicle was traveling in westerly direction on a two-lane, rural roadway on an approach to a moderate right curve. The driver attempted to negotiate the curve at an unsafe speed and drifted across the center line. The driver subsequently braked with sufficient force to lock the left front wheel of the vehicle. The vehicle skidded off the left road edge and impacted an earth embankment with the frontal area of the vehicle. There was a positive-sloped earth embankment adjacent to the left shoulder. The area outboard of the right road edge was level.

ACCIDENT COLLISION DIAGRAM

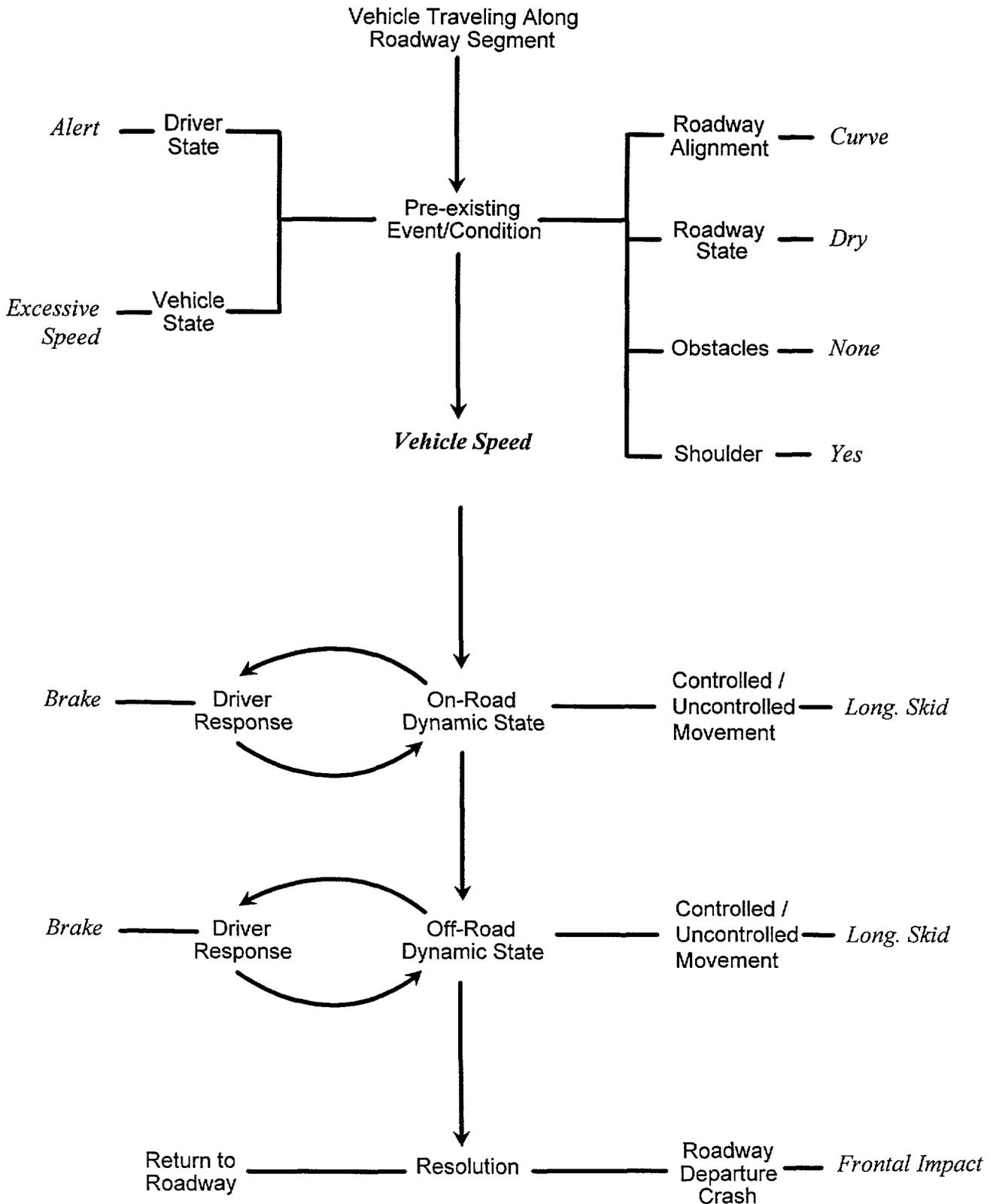
PSU No. 05

Case Number - Stratum 035E

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Intoxicated
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-7-93	Weather	Clear/Cloudy
Time:	0045	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	41	Year:	1986
Driver Sex:	Male	Vehicle Make:	Buick
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Somerset/ Skylark
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	99 Unknown		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - intoxicated*
ROADSIDE DEPARTURE: *Right*

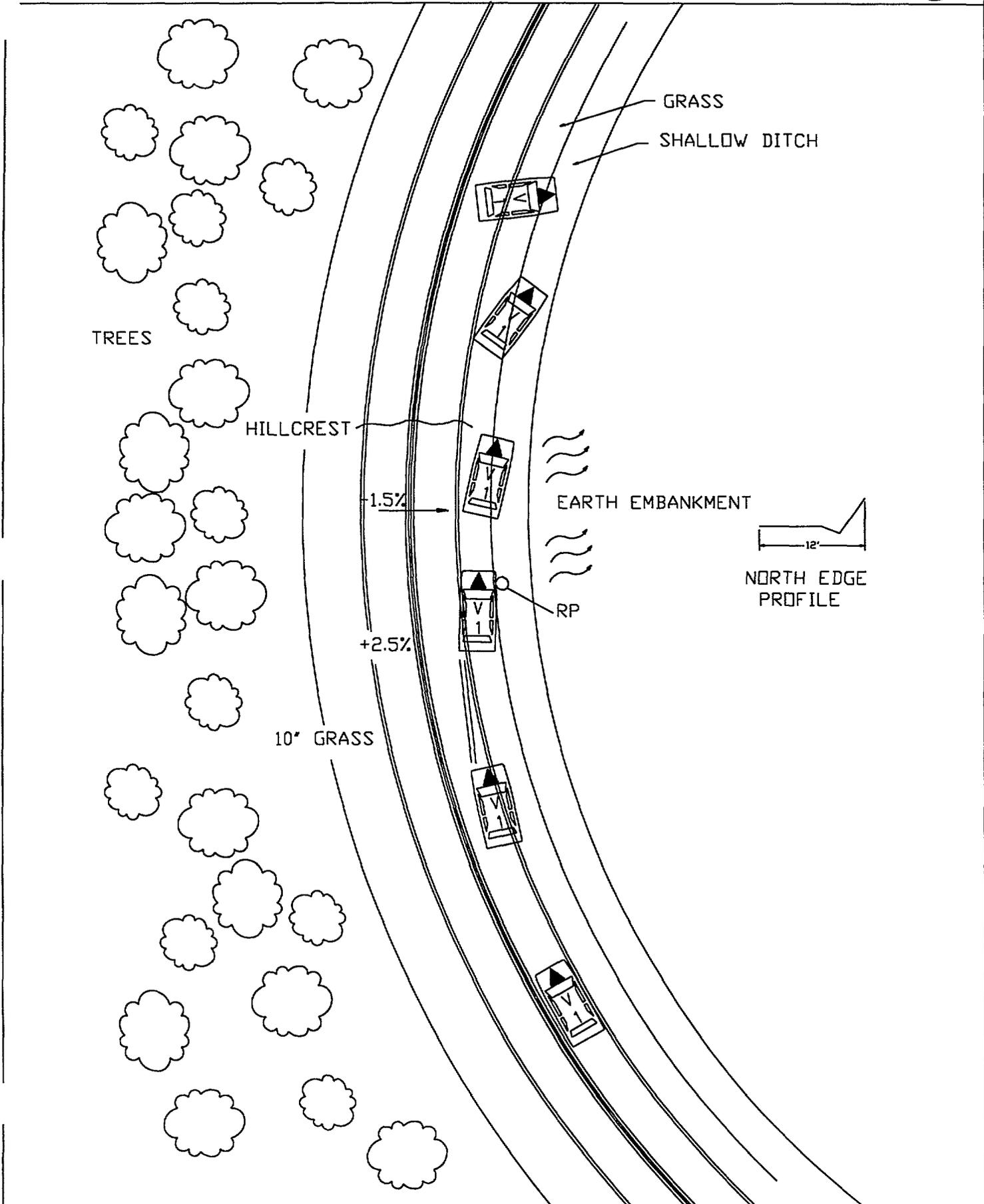
The subject vehicle was traveling in a westerly direction on a dry two-lane, rural, asphalt roadway in a 56 km/h (35 mph) speed zone. The road curved to the right and had a +2.5% slope. The driver failed to negotiate the right curve and departed the right road edge in a tracking mode. The vehicle traversed a grassy shoulder and sideswiped a wooden utility pole with the right side area. The vehicle subsequently yawed in a clockwise direction as it contacted a shallow ditch and earth embankment. As a result, the vehicle overturned onto its roof. The driver was intoxicated with a BAC of 0.22. The surface was marked with solid white edge lines and double yellow center lines.

ACCIDENT COLLISION DIAGRAM

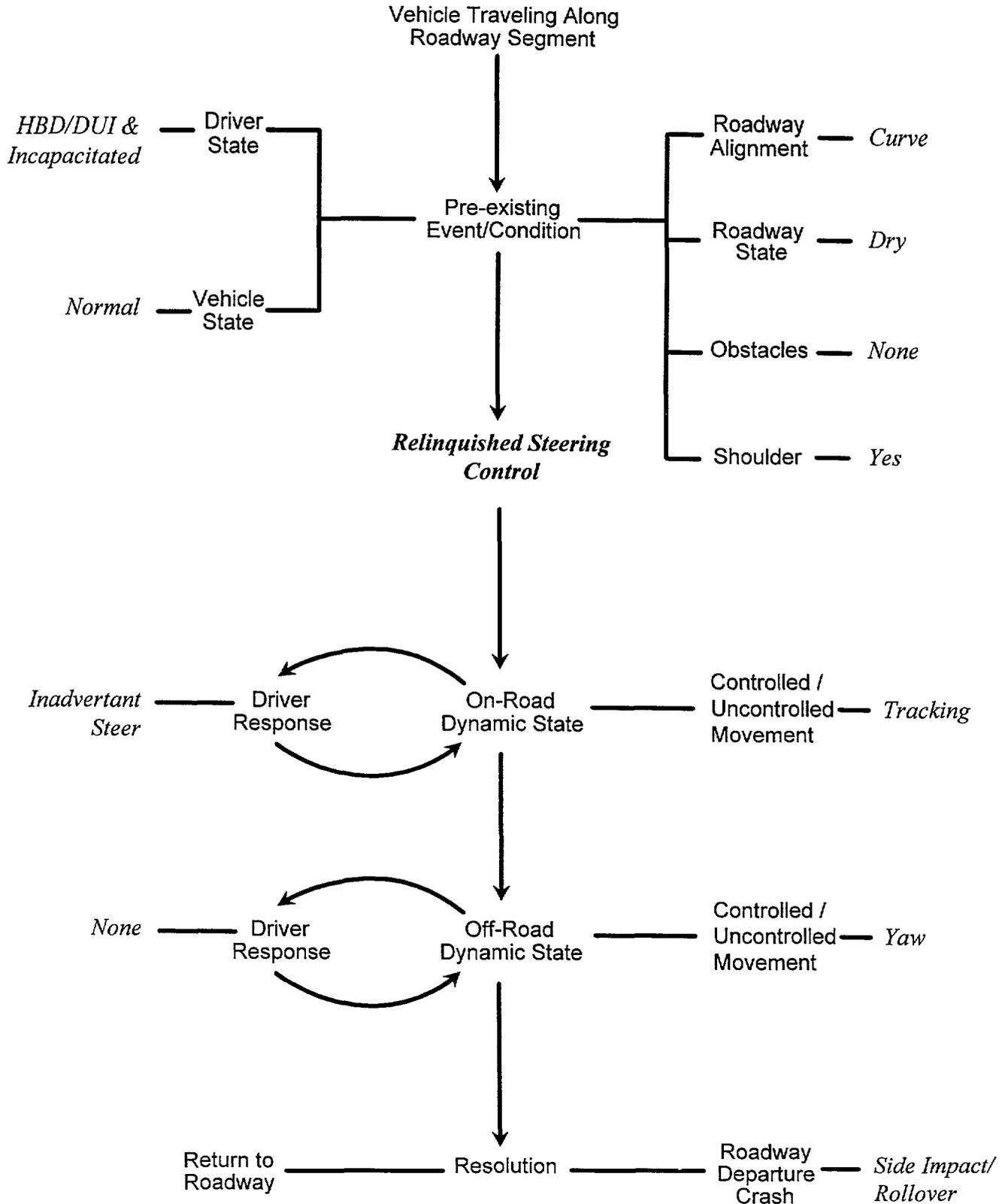
PSU No. 05

Case Number - Stratum 105D

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Failure
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-5-93	Weather:	Clear/Cloudy
Time:	1815	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	1 (C)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	41	Year:	1990
Driver Sex:	Female	Vehicle Make:	Toyota
Impairment:	None	Vehicle Model:	Corolla
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	Tire Blowout
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	03 Braking (lockup)		
GV64:	01 Going straight		
GV65:	01 This vehicle loss of control due to blow out or flat tire		
GV66:	2 Skidding longitudinally - less than 30 degrees rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Failure*
ROADSIDE DEPARTURE: *Right*

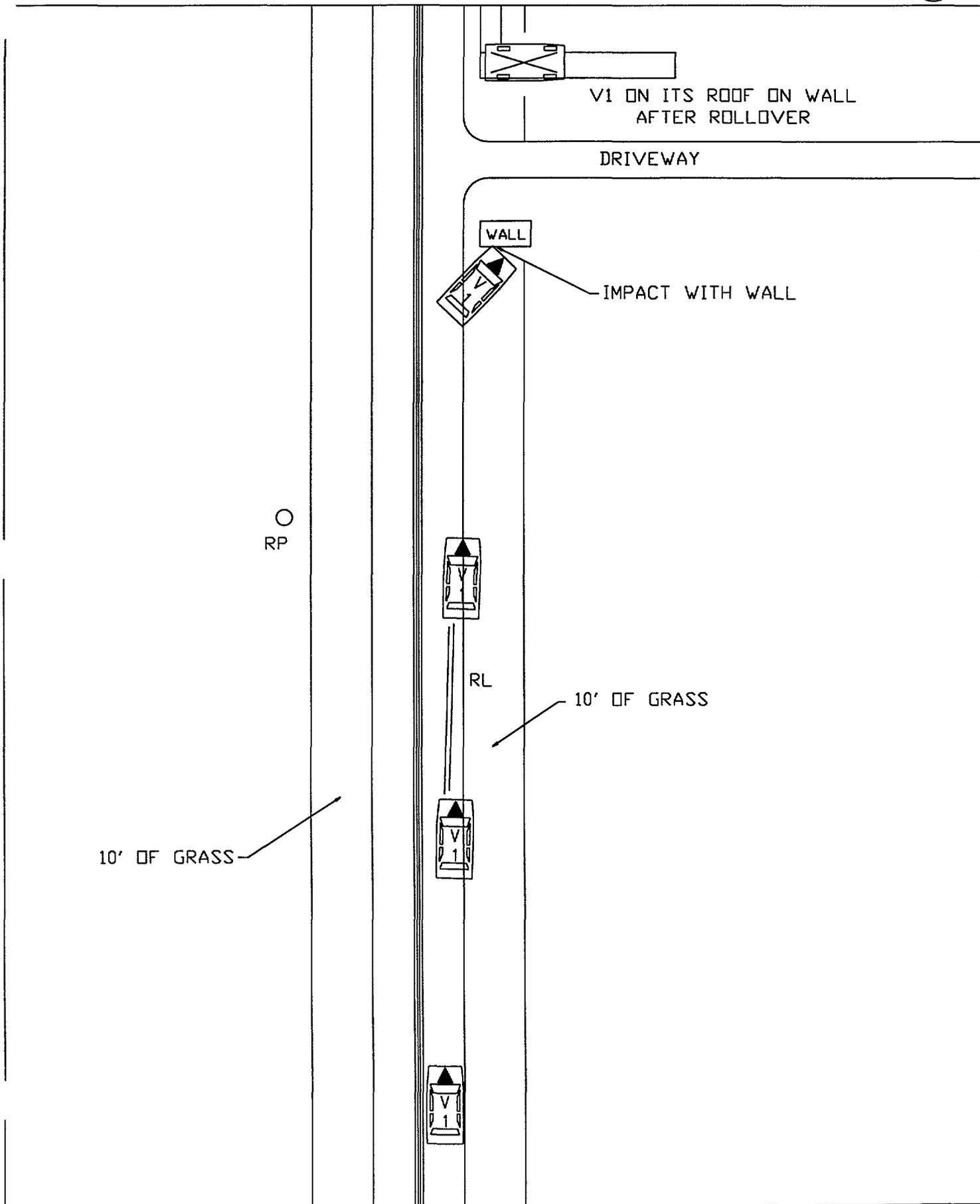
The subject vehicle was westbound on an urban, two-lane asphalt roadway during daylight hours. The road surface was dry and straight with an estimated +1.5% slope. The driver was traveling at 56 km/h (35 mph) when the left front tire failed. The vehicle yawed in a clockwise direction and departed the right road edge. The vehicle impacted a stone wall at the mouth of a private driveway and overturned, coming to rest on a second wall that was located on the opposite side of the driveway. Both edges were marked with solid white lines and the center was marked with double yellow center lines. There were no shoulders adjacent to the road edges. The primary causal factor was a vehicle related failure, left front tire blowout.

ACCIDENT COLLISION DIAGRAM

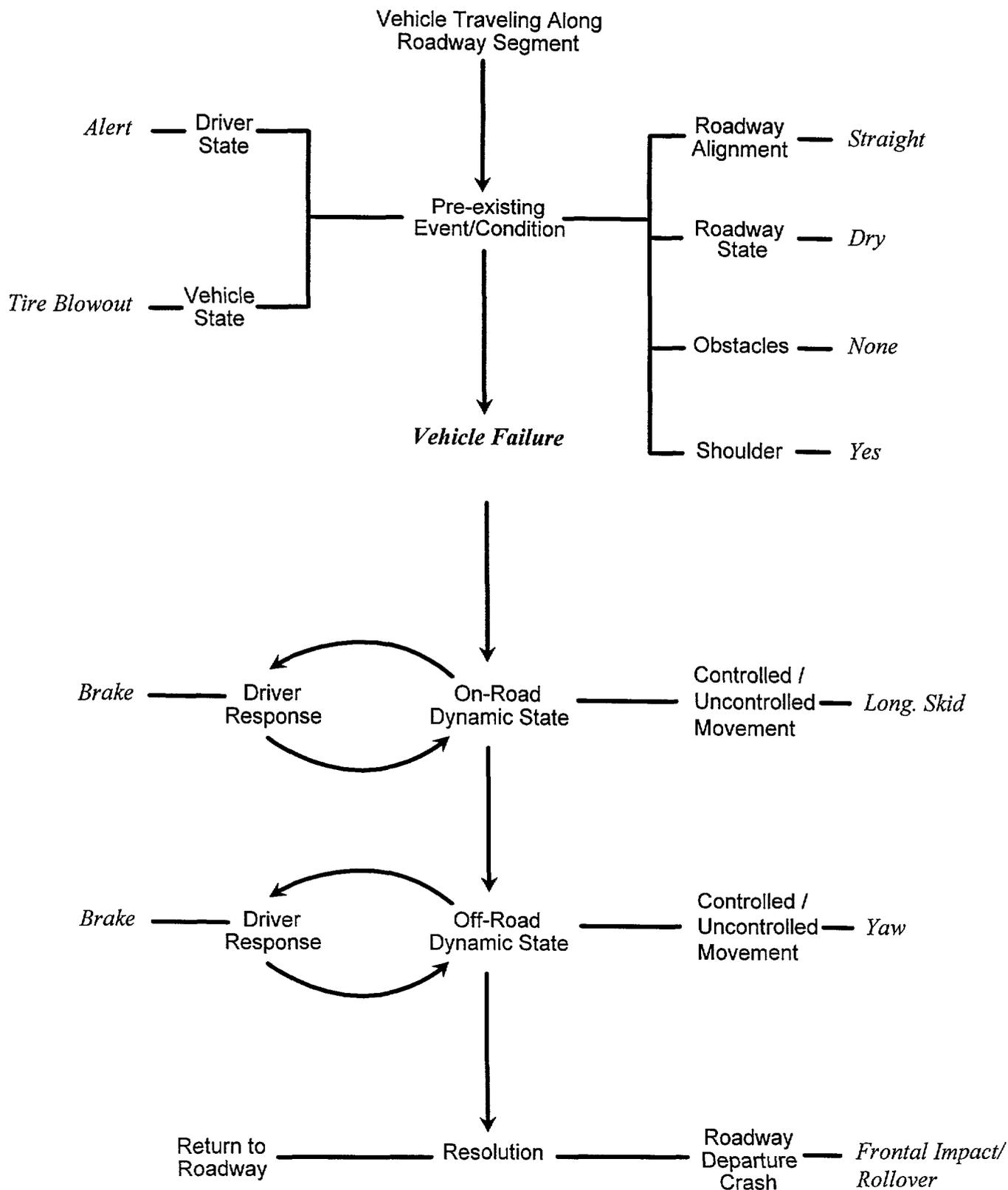
PSU No. 05

Case Number - Stratum 106F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	8-4-93	Weather:	Clear/Cloudy
Time:	0305	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Artificial lighting
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	50	Year:	1990
Driver Sex:	Male	Vehicle Make:	Mazda
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	MPV
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	10 Turning left		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*

ROADSIDE DEPARTURE: *Right*

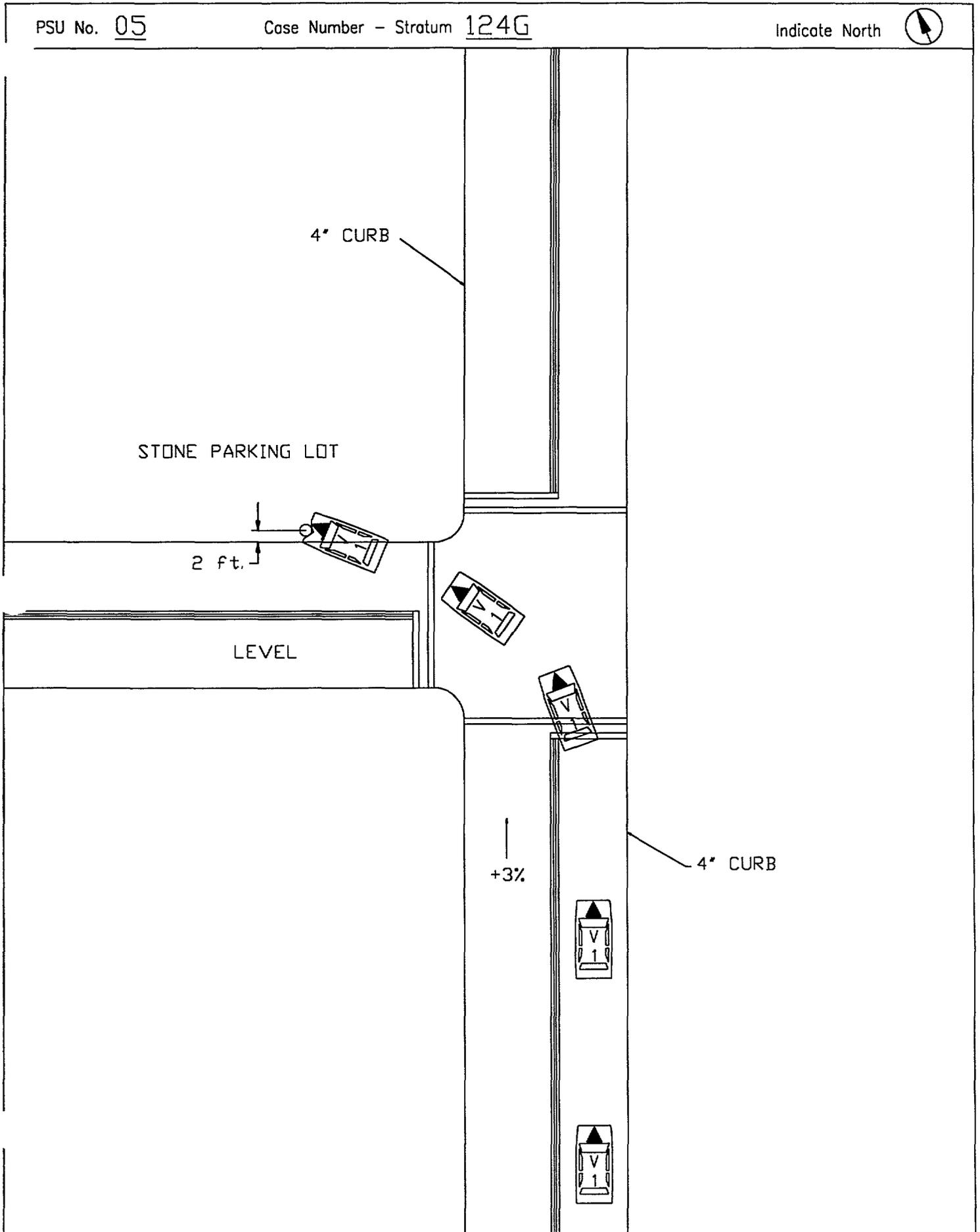
The subject vehicle was traveling in a northerly direction on a two-lane roadway on an approach to a 3-leg T-intersection. Traffic flow through the intersection was controlled by an overhead signal system. The driver initiated a left turn through the intersection on a green signal phase at an unsafe speed and drove off the right edge of the intersecting roadway. The frontal area of the vehicle impacted a wooden utility pole that was located 0.6 m outboard of the road edge. The driver was intoxicated (BAC unknown).

ACCIDENT COLLISION DIAGRAM

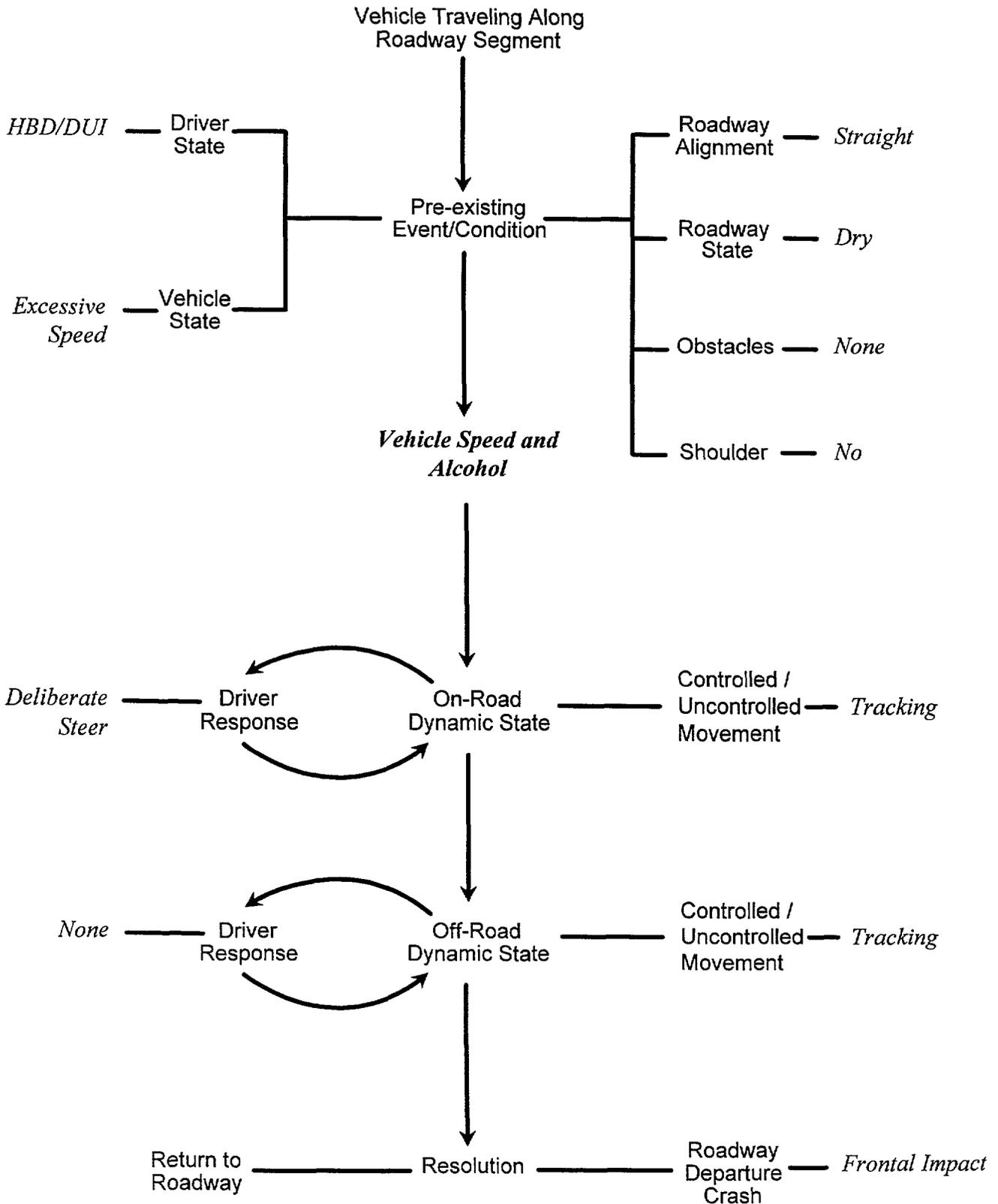
PSU No. 05

Case Number - Stratum 124G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	3-4-93	Weather:	Rain
Time:	2330	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	Artificial lighting
Accident Severity:	1 (C)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	19	Year:	1980
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	Other (alcoh. consumption - BAC .06)	Vehicle Model:	Camaro
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	4	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	07 Steering right		
GV64:	13 Negotiating a curve		
G V65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*

ROADSIDE DEPARTURE: *Left*

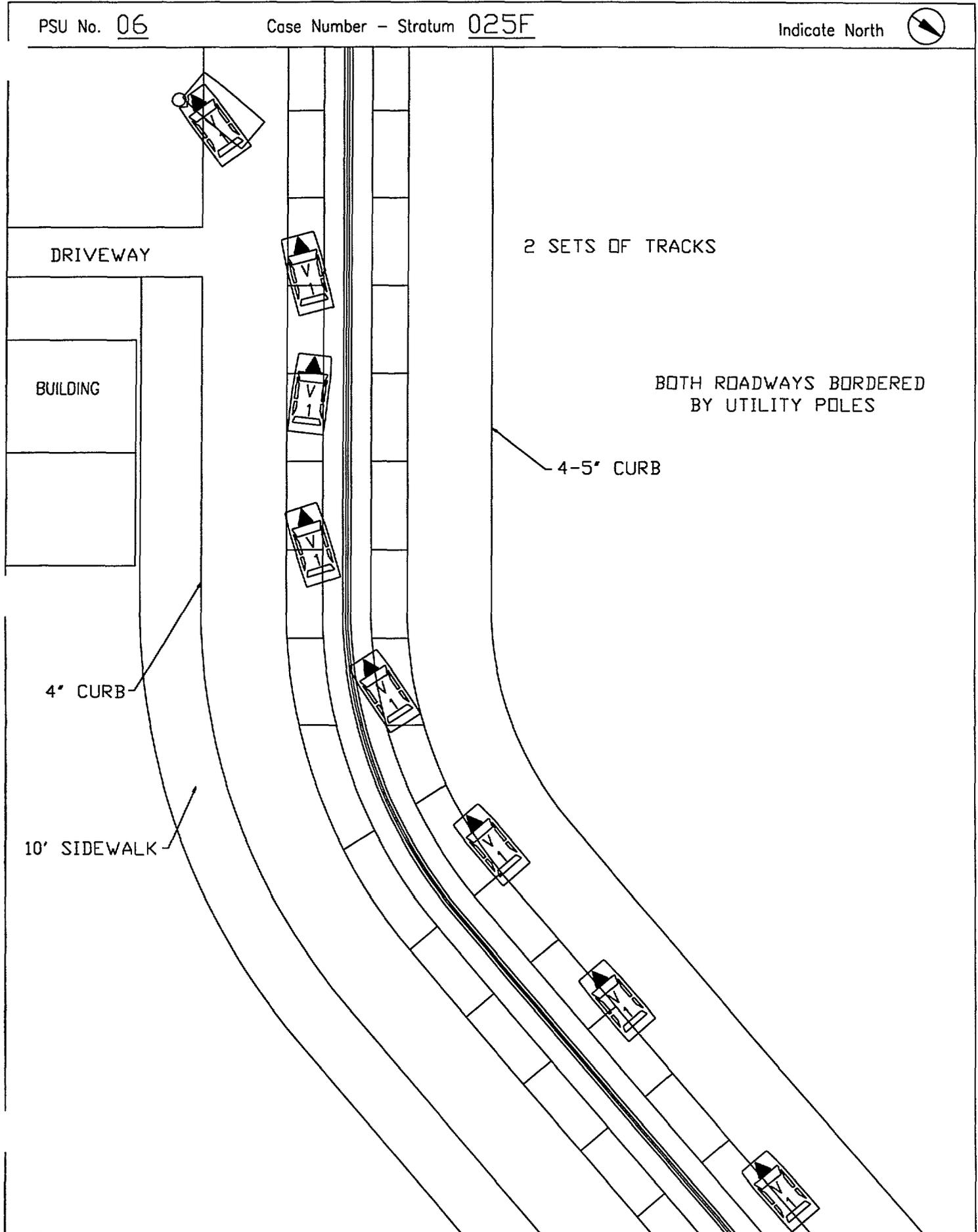
The subject vehicle was traveling in a southerly direction on a level, four-lane, urban roadway that contained two sets of railroad tracks within the inboard travel lanes. The driver had a BAC of 0.06 and entered a moderate right curve at an excessive speed. The driver allowed the vehicle to drift across the center line while attempting to negotiate the curve. The vehicle continued across the opposing travel lanes and departed the left road edge. The left frontal area of the vehicle impacted and fractured a wooden utility pole that was located approximately 0.6 m outboard of the road edge.

ACCIDENT COLLISION DIAGRAM

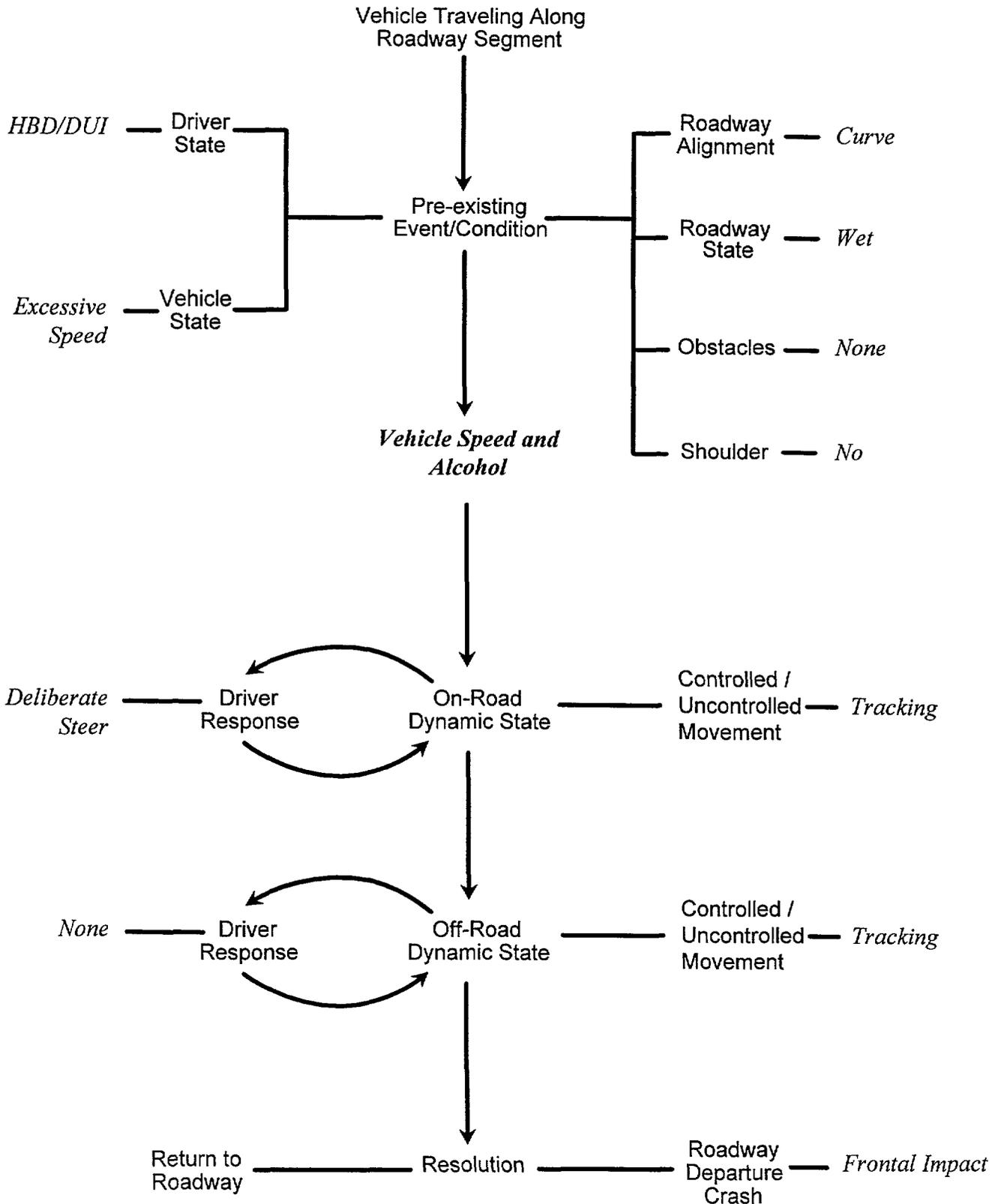
PSU No. 06

Case Number - Stratum 025F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Lost Directional Control

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	I-5-93	Weather	Snow/Sleet/Hail
Time:	0937	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	22	Year:	1989
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Explorer
Familiarity with Road:	Yes	ABS:	Yes
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	09	Braking and steering right	
GV64:	13	Negotiating a curve	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	7	Other vehicle loss-of-control	
GV67:	4	Vehicle departed roadway	

CAUSAL FACTOR: *Lost Directional Control*

ROADSIDE DEPARTURE: *Right*

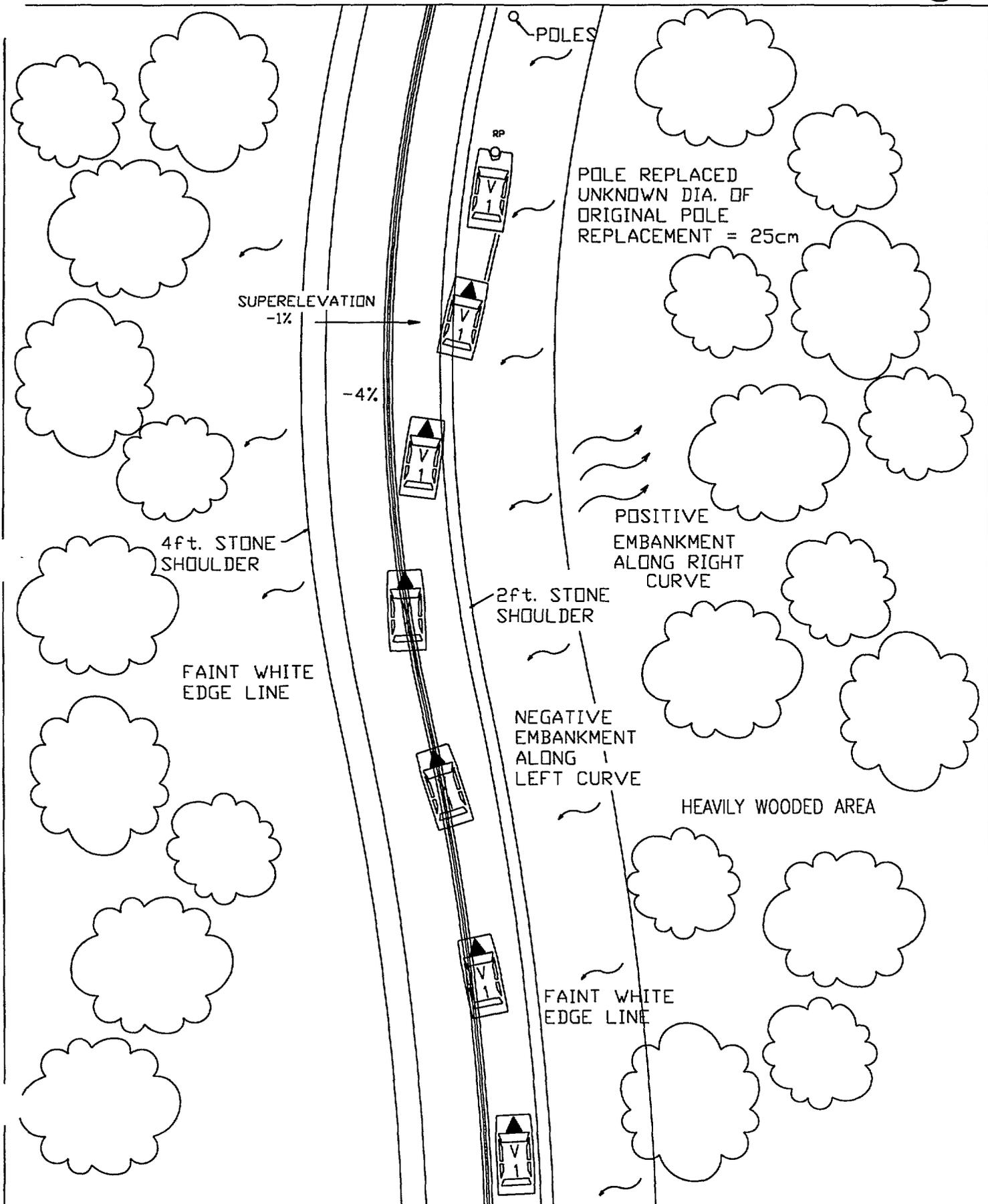
The subject vehicle was traveling through sleet and freezing rain in a southeasterly direction on an icy, two-lane, undivided, asphalt roadway with a long downhill grade. As the driver entered a left curve at an estimate speed of 40 km/h (25 mph), the vehicle drifted across the center line. The driver applied a clockwise steering input and pumped the brakes as the road switched to the right curve of a lazy S-curve configuration. The vehicle departed the right road edge in a slight counterclockwise yaw and impacted a utility pole that was approximately 1.5 m outboard of the road edge.

ACCIDENT COLLISION DIAGRAM

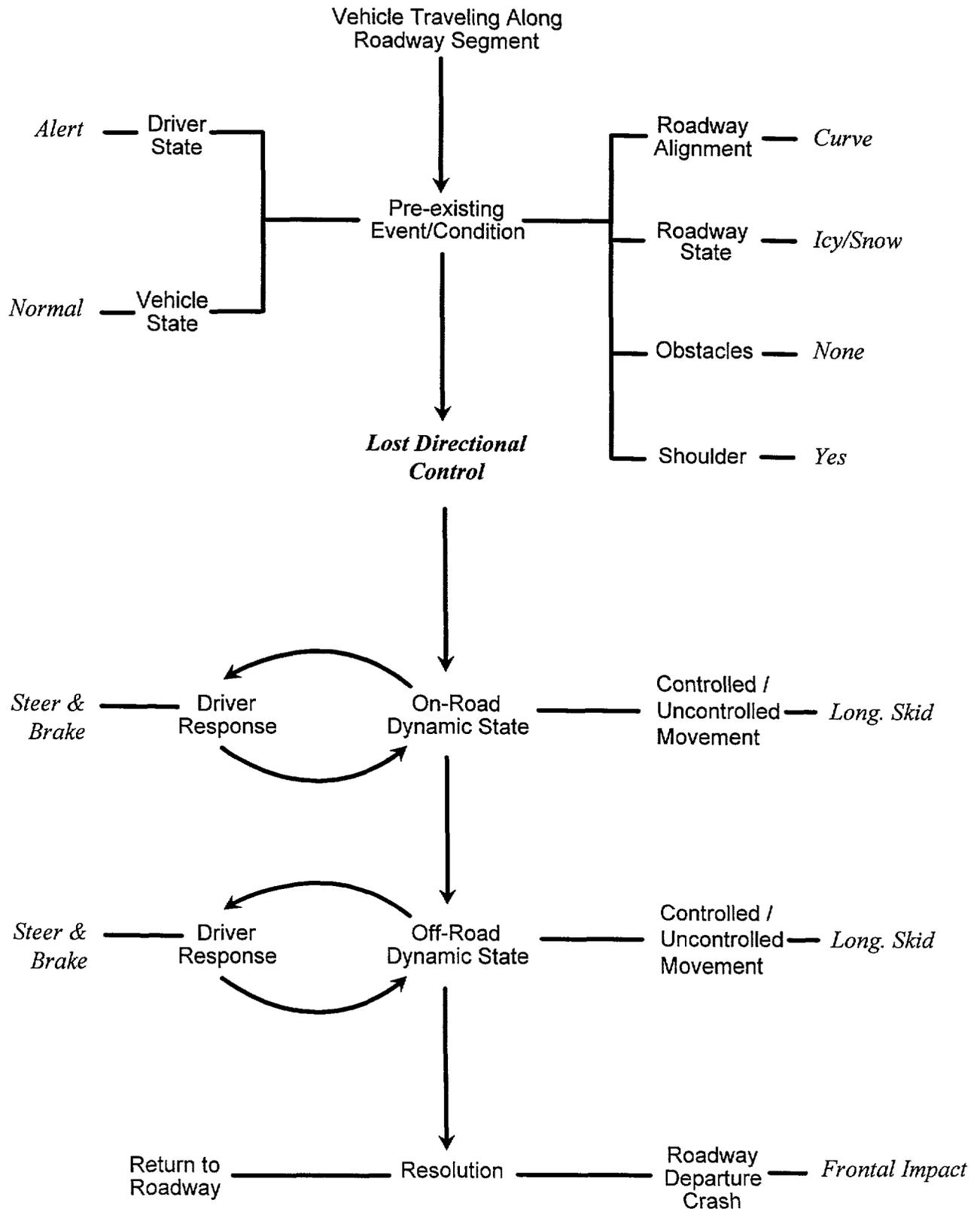
PSU No. 08

Case Number - Stratum 016G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Excessive

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	1-3-93	Weather:	Clear/Cloudy
Time:	1742	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	16	Year:	1975
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Mustang/ Mustang II
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	13 Negotiating a curve		
GV65:	06 This vehicle loss of control due to traveling too fast for conditions		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: *Right*

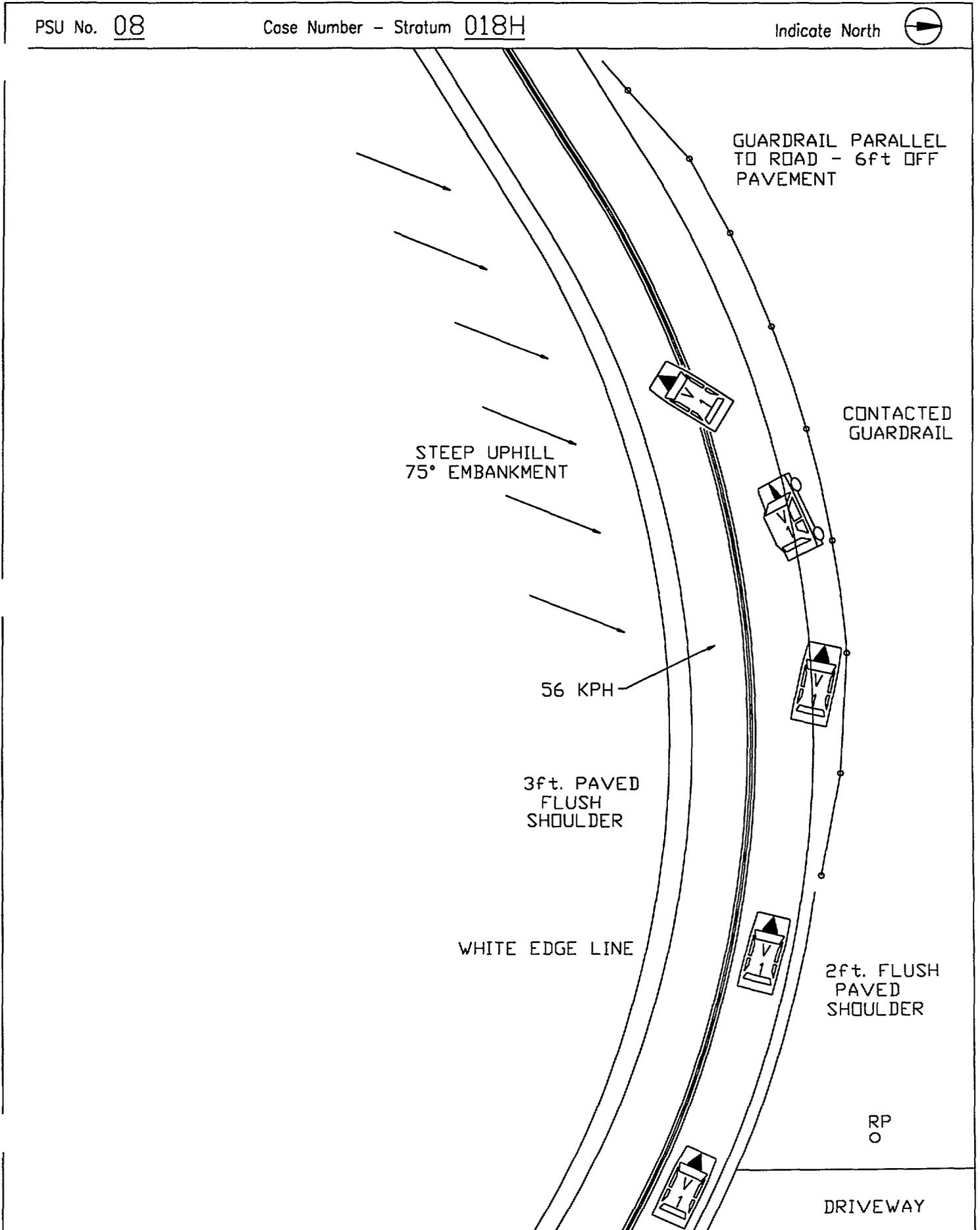
The subject vehicle was traveling in a westerly direction on a two-lane road in a posted 56 km/h (35 mph) speed zone, The driver attempted to negotiate a moderate left curve at an unsafe speed. The vehicle drifted off the right road edge and impacted the end of a W-beam guardrail system that paralleled the right road edge. The vehicle ramped up the guardrail and overturned onto the asphalt road surface. The left edge of the roadway was bordered by a steep embankment.

ACCIDENT COLLISION DIAGRAM

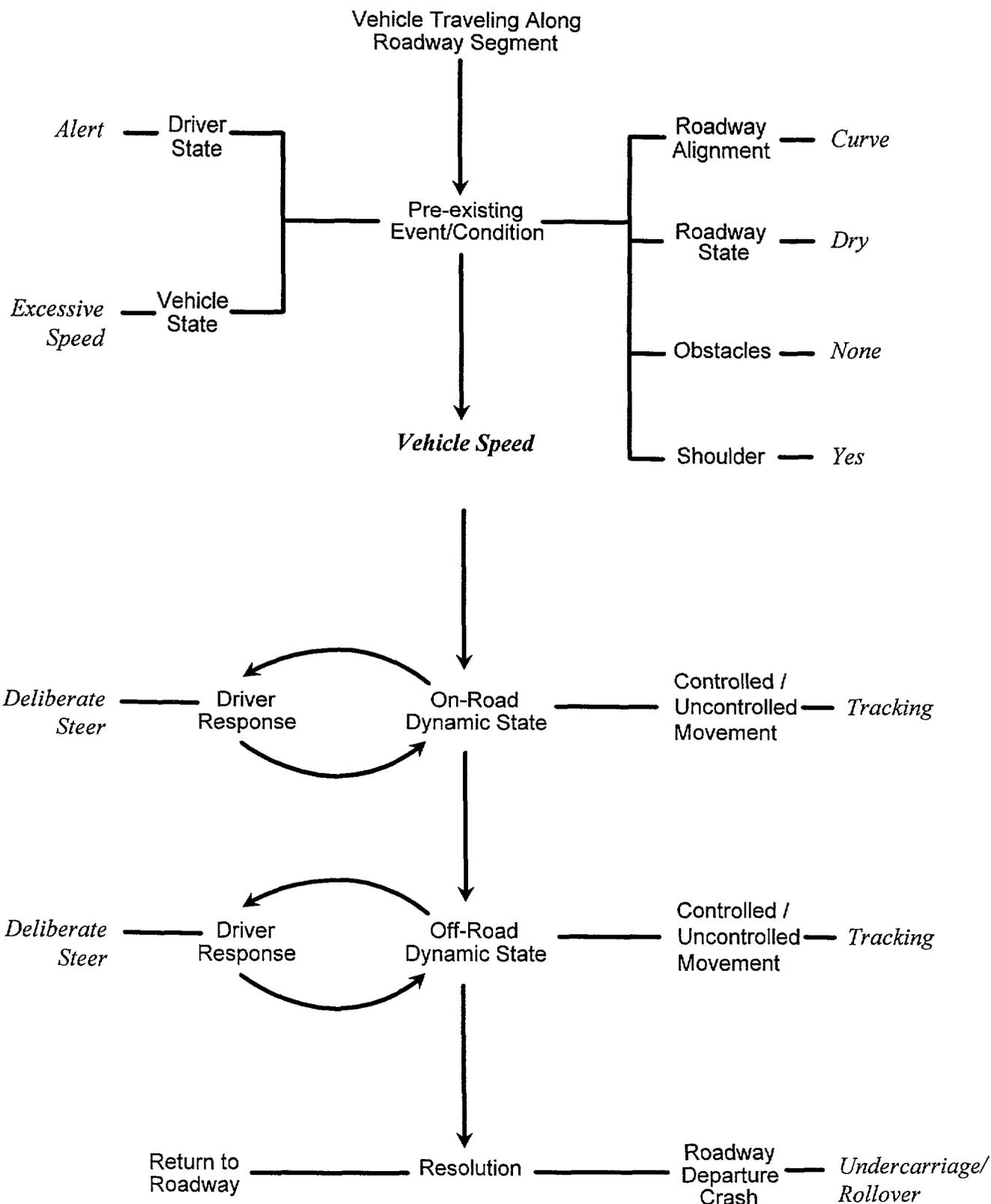
PSU No. 08

Case Number - Stratum 018H

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR.: *Driver Relinquishes Steering Control - Physical (seizure/passed out)*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	2-3-93	Weather:	Snow/Sleet/Hail
Time:	1322	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	80	Year:	1989
Driver Sex:	Male	Vehicle Make:	Oldsmobile
Impairment:	Physical (seizure/passed out)	Vehicle Model:	Ninety-Eight
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	4	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	13	Negotiating a curve	
GV65:	08	This vehicle loss of control due to other	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Physical
(seizure/passed out)*

ROADSIDE DEPARTURE: *Right*

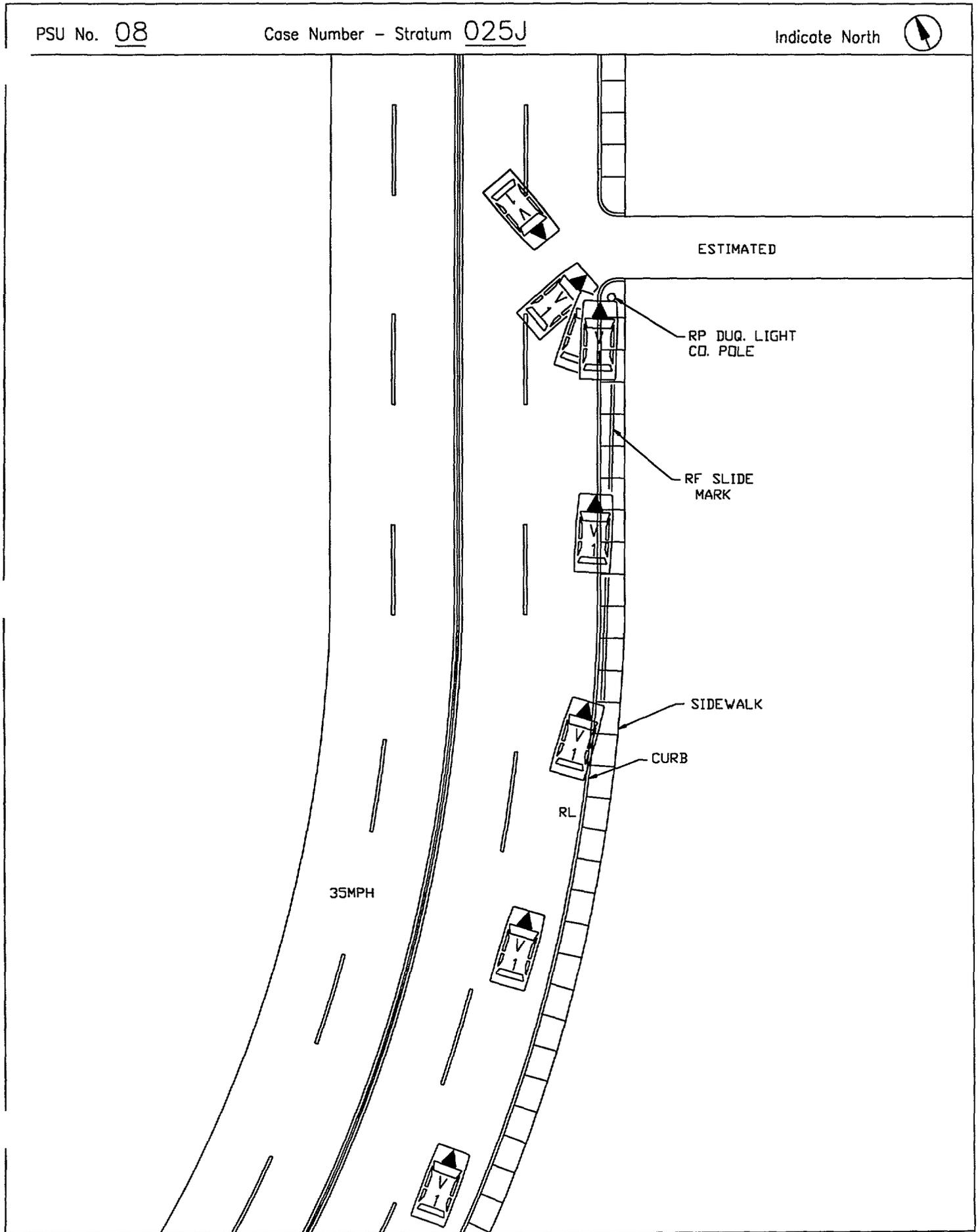
The subject vehicle was traveling during daylight hours in a northerly direction on the outboard lane of a four-lane roadway with a -2% slope. The driver passed out while attempting to negotiate a moderate left curve. The vehicle departed the right road edge and mounted a barrier and traveled along a concrete sidewalk that paralleled the roadway. The frontal area of the vehicle impacted a utility pole that was located several feet outboard of the curb line. The vehicle rotated approximately 120 degrees in a clockwise direction before coming to rest across the northbound travel lanes. The negative slope afforded the driver good visibility.

ACCIDENT COLLISION DIAGRAM

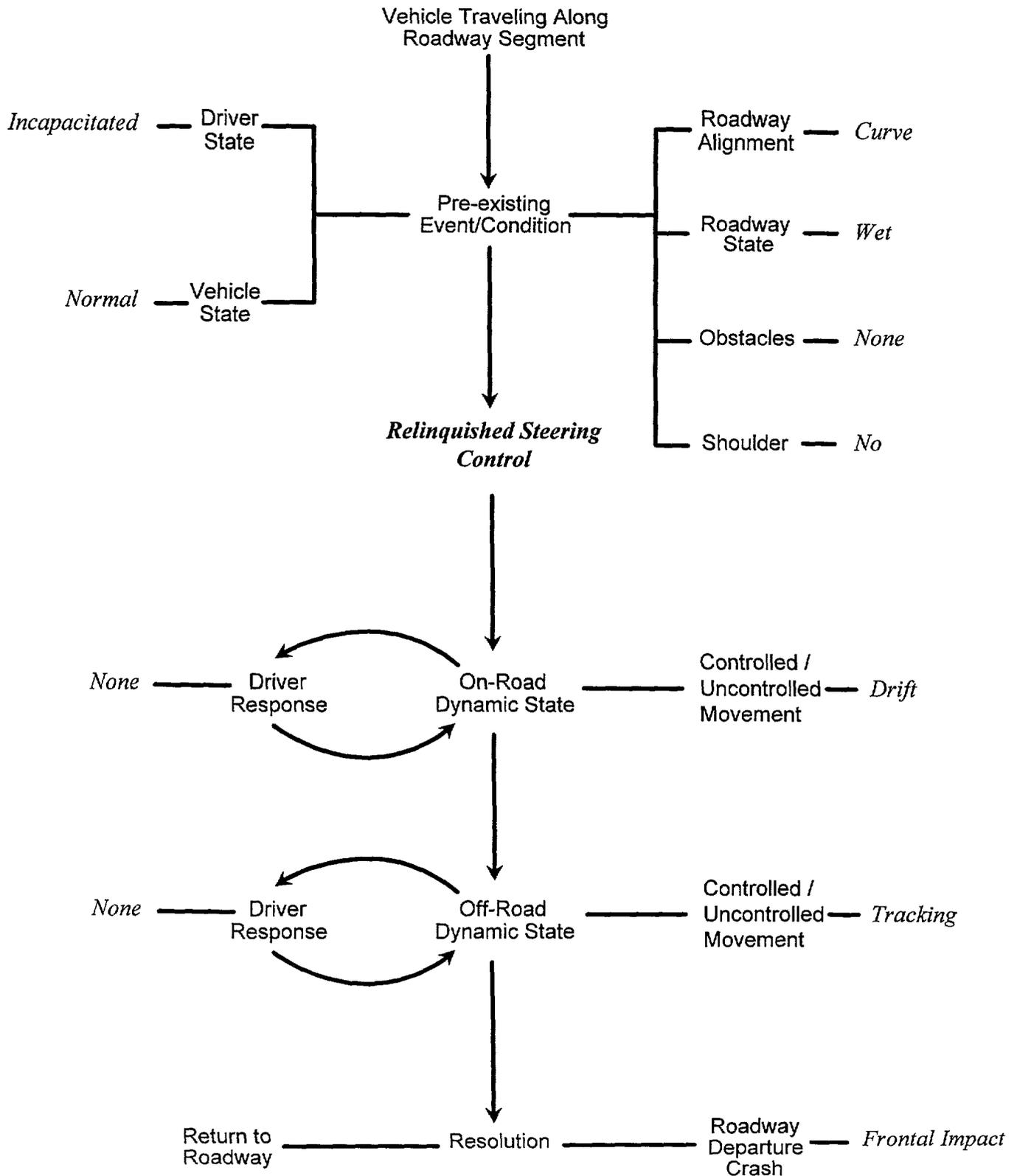
PSU No. 08

Case Number - Stratum 025J

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Inattention
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-1-93	Weather:	Clear/Cloudy
Time:	0511	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	36	Year:	1981
Driver Sex:	Male	Vehicle Make:	Plymouth
Impairment	Other (alcoh. consumption - BAC unknown)	Vehicle Model:	Horizon
Familiarity with Road:	Yes	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	09	Turning right	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

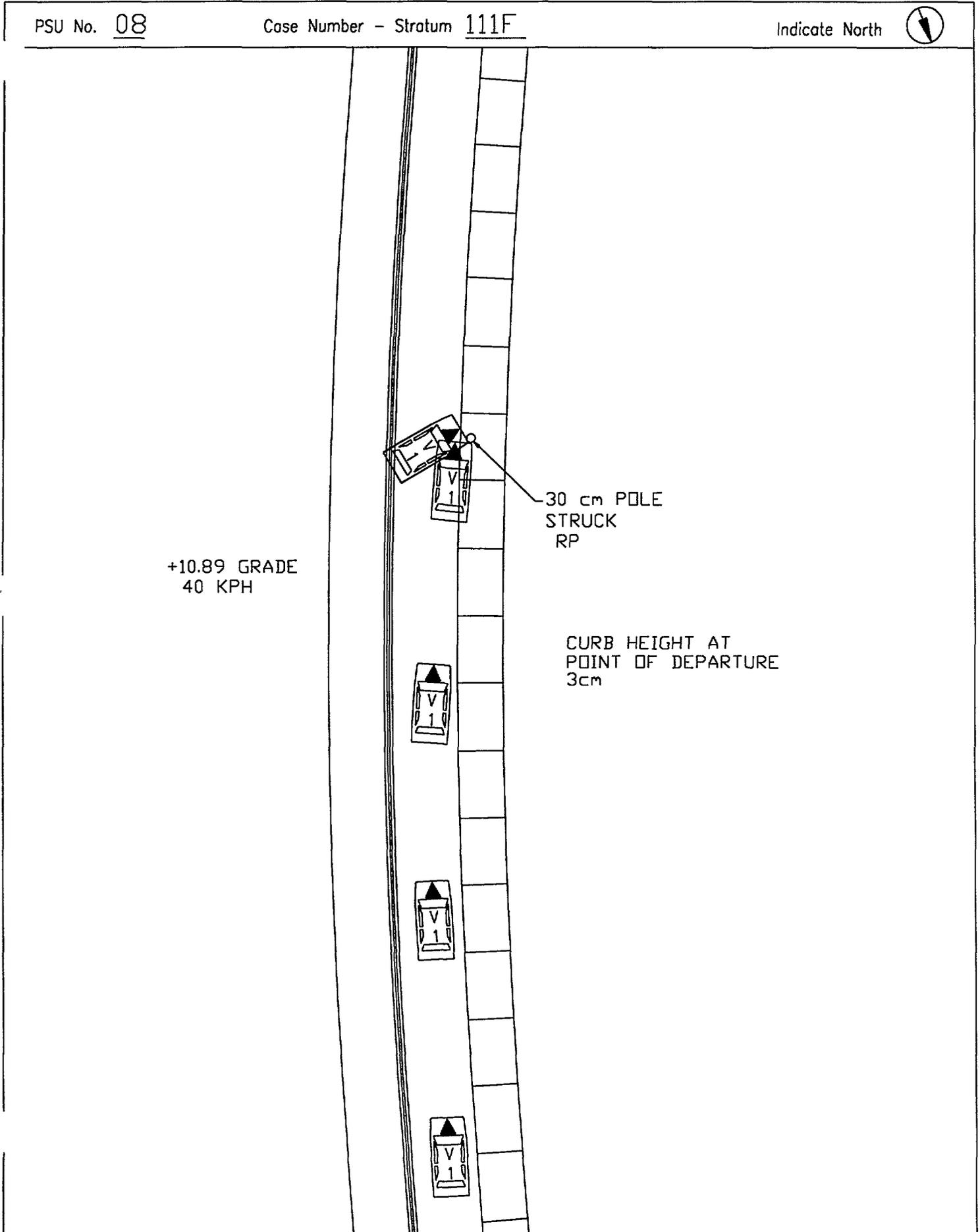
The subject vehicle was proceeding in a southerly direction on a dry, two-lane, urban, asphalt roadway at dawn. The roadway curved slightly to the right, was bounded by 2.5 cm curbs, and had a +1 1% slope. The driver was inattentive to the driving task and attempted to light a cigarette, allowing the vehicle to drift off the right edge of the roadway. The right front corner area of the vehicle struck a utility pole. The vehicle rotated approximately 45 degrees around the pole in a clockwise direction and came to rest in contact with the pole.

ACCIDENT COLLISION DIAGRAM

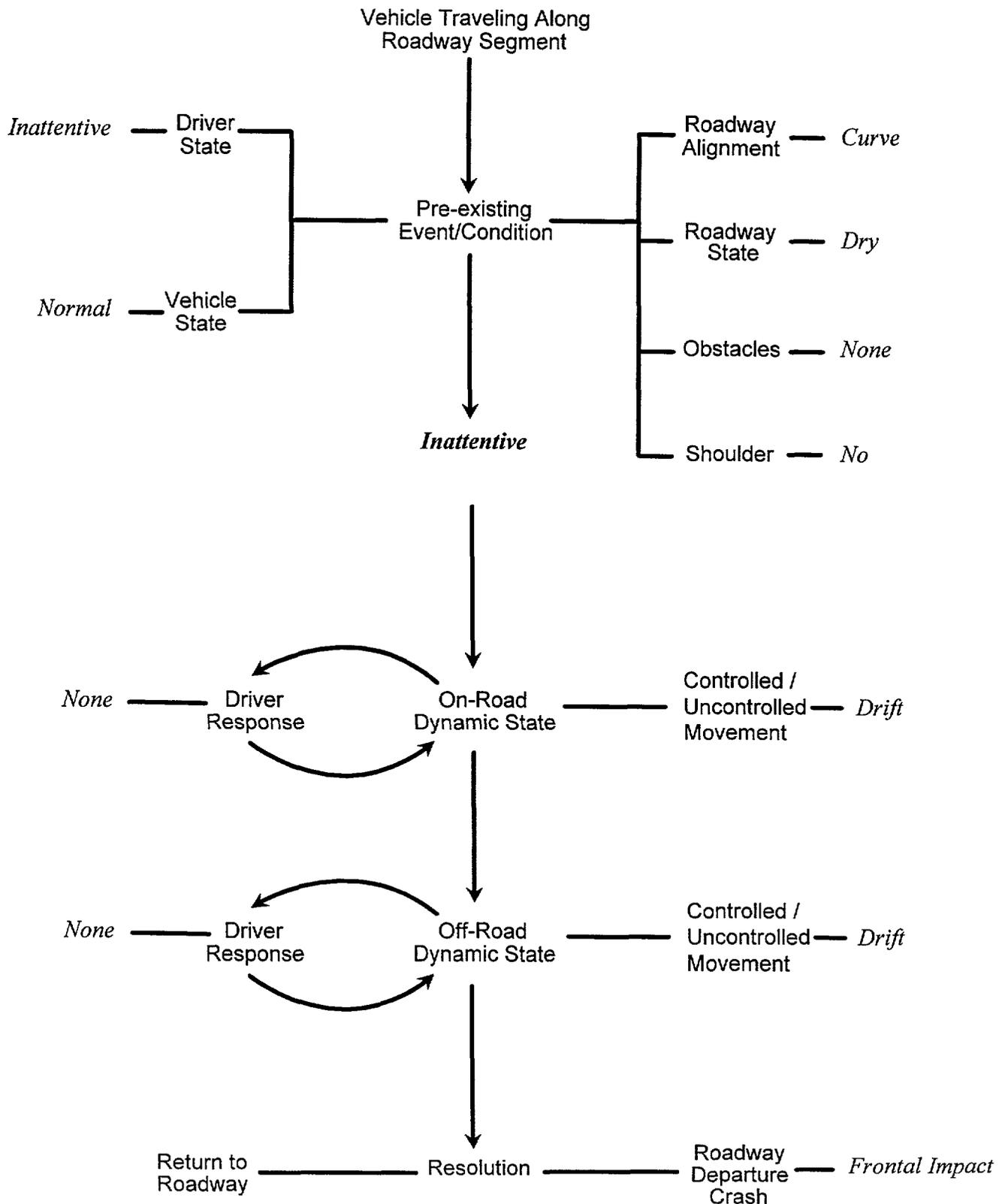
PSU No. 08

Case Number - Stratum 111F

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	7-6-93	Weather:	Clear/Cloudy
Time:	2227	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Artificial lighting
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	40	Year:	1989
Driver Sex:	Female	Vehicle Make:	Dodge
Impairment:	None	Vehicle Model:	Caravan
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	3	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	01 Going straight		
G V65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

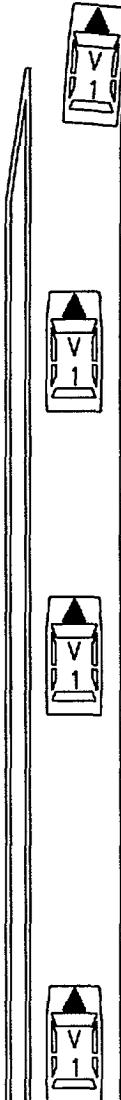
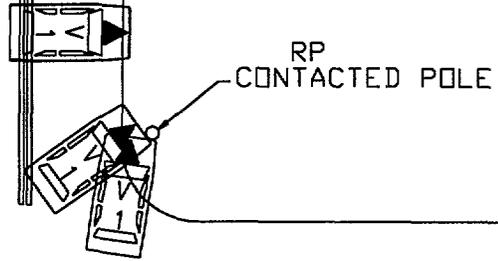
The subject vehicle was traveling in an easterly direction on a dry, two-lane, divided, asphalt roadway that channeled to an undivided roadway at the mouth of a 3-leg T-intersection. The vehicle was traveling at an estimated speed of 40 km/h (25 mph) on the approach toward the intersection. The driver was inattentive and allowed the vehicle to drift to the right and depart the southeast corner of the intersection. The right front tire mounted the barrier curb and the right frontal area of the vehicle impacted a utility pole. The vehicle rotated in a clockwise direction and overturned. The road had solid white edge lines and barrier curbs outboard of the edge line. There were no shoulders on either side of the road.

ACCIDENT COLLISION DIAGRAM

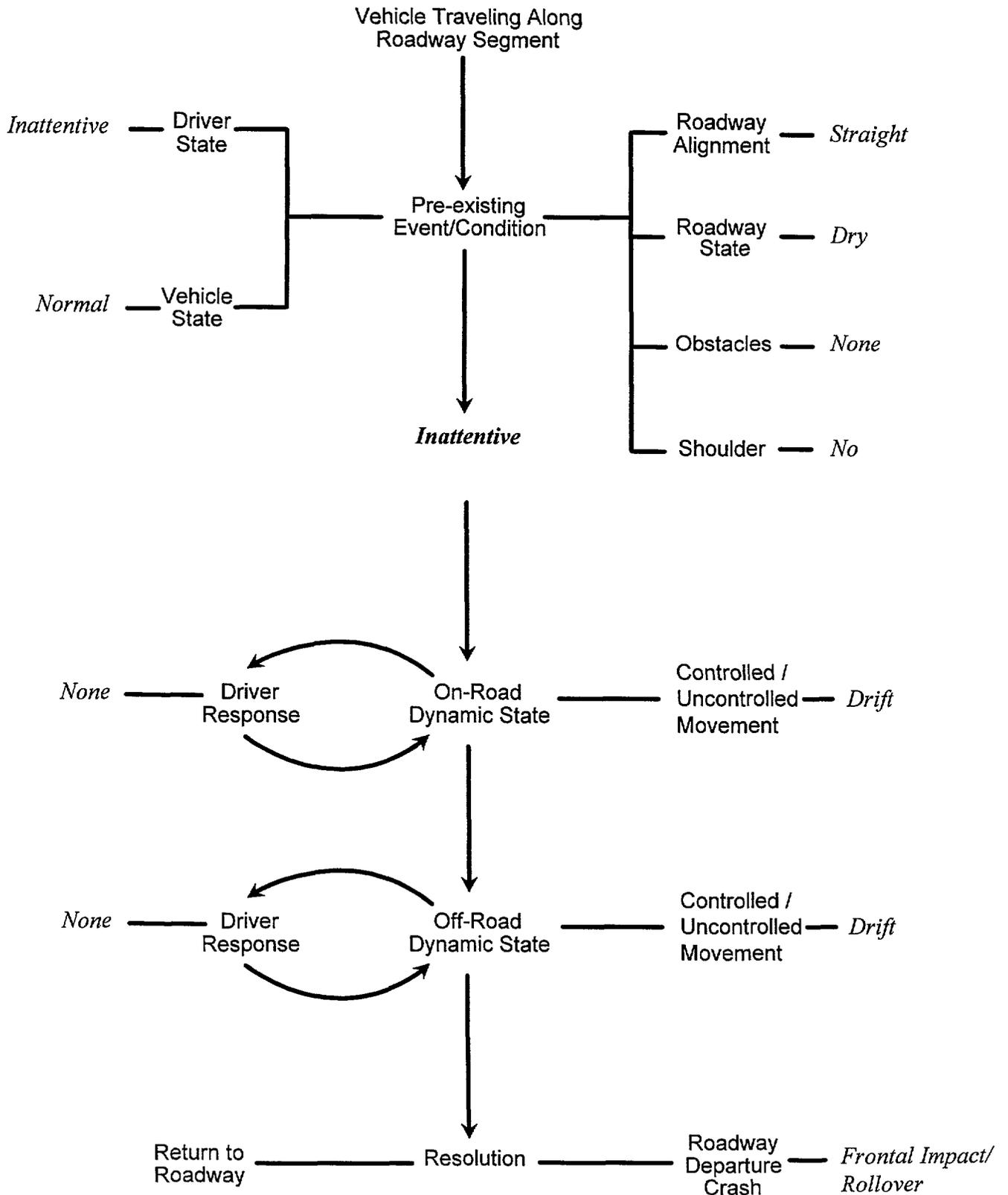
PSU No. 08

Case Number - Stratum 124G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Excessive
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	7-7-93	Weather:	Clear/Cloudy
Time:	0350	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Artificial lighting
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	Unknown	Year:	1990
Driver Sex:	Male	Vehicle Make:	Mitsubishi
Impairment:	Unknown	Vehicle Model:	Eclipse
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	1	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	07 Steering right		
GV64:	13 Negotiating a curve		
GV65:	06 This vehicle loss of control due to traveling too fast for conditions		
GV66:	3 Skidding laterally - clockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: Vehicle Speed - Excessive
ROADSIDE DEPARTURE: *Left*

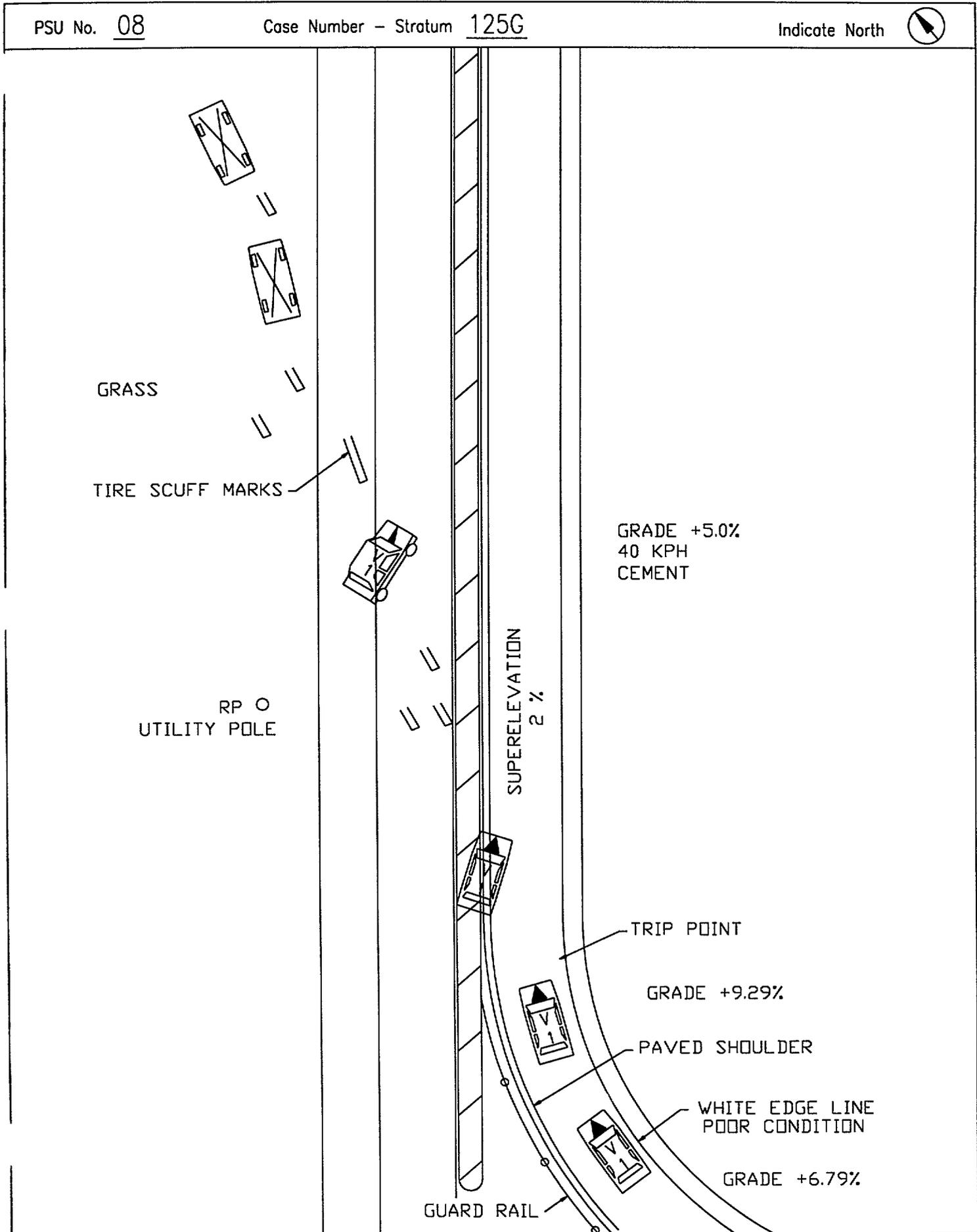
The subject vehicle was traveling on a one-lane concrete ramp with a positive slope that curved moderately to the right. As the driver attempted to negotiate the curve, the vehicle apparently yawed in a clockwise direction and departed the left road edge. The vehicle ramped up onto a curbed median and subsequently overturned. Roadway edge lines were faint. Excessive speed was the causal factor based on the travel distance of the vehicle during the rollover sequence.

ACCIDENT COLLISION DIAGRAM

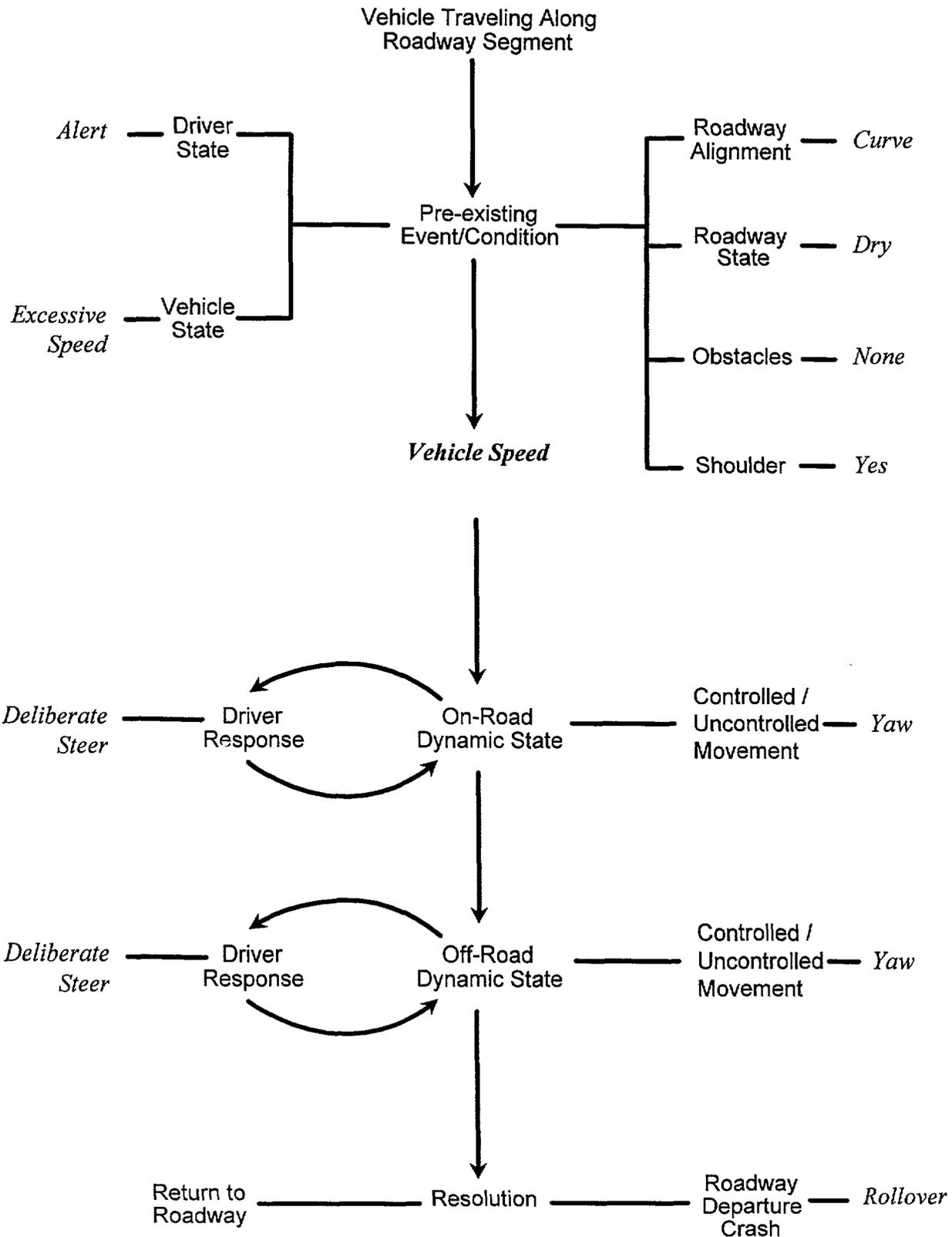
PSU No. 08

Case Number - Stratum 125G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - intoxicated

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-7-93	Weather:	Clear/Cloudy
Time:	0150	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:-	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	28	Year:	1984
Driver Sex:	Male	Vehicle Make:	Audi
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	5000
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14	01	No avoidance actions	
GV64:	13	Negotiating a curve	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*
ROADSIDE DEPARTURE: *Right*

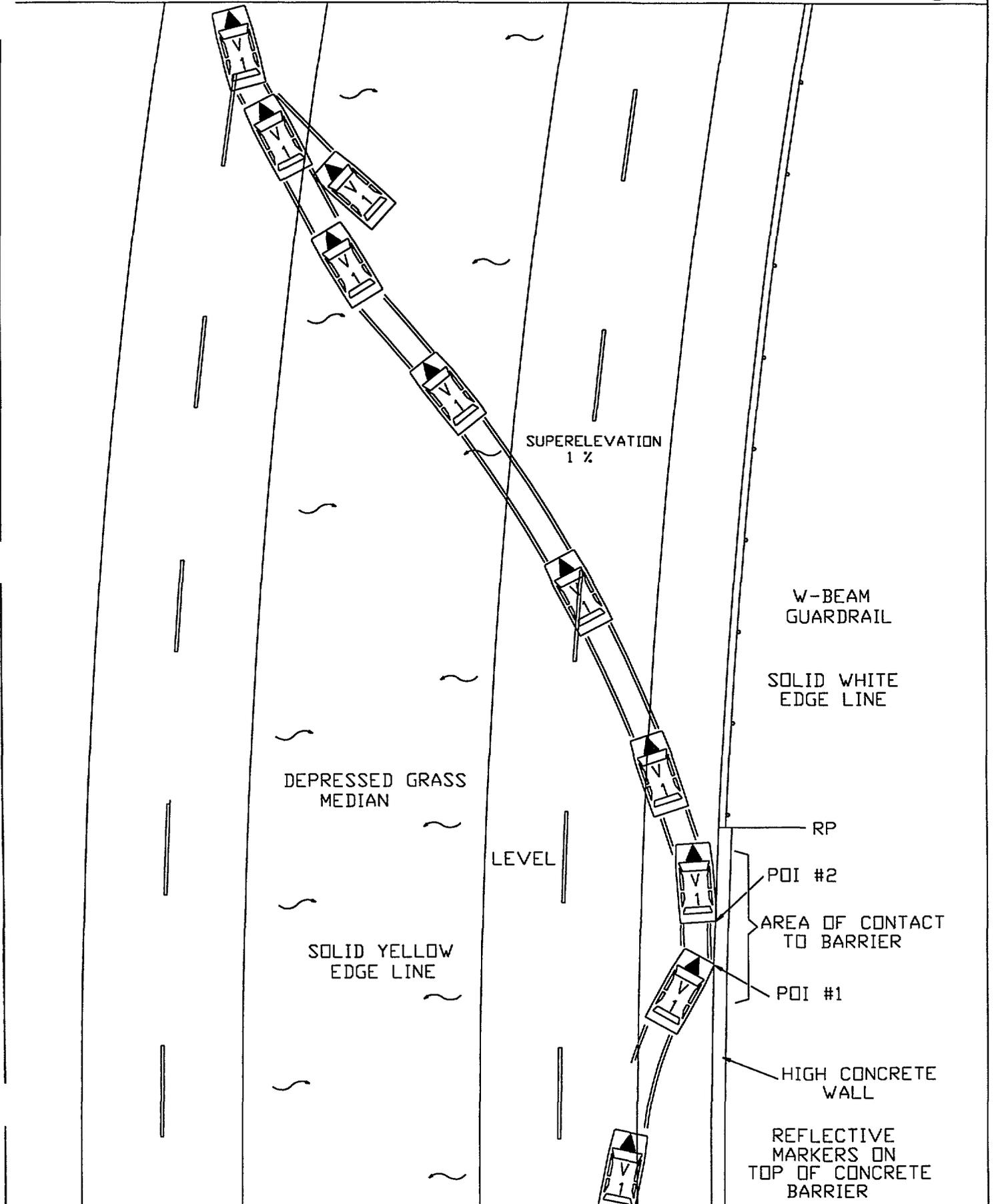
The subject vehicle was traveling at night in a westerly direction in the outboard lane of an unlighted, dry, level, four-lane, divided, concrete interstate that curved to the right with a slight superelevation. Police reported the vehicle's speed at 89 km/h (55 mph). The driver was intoxicated (BAC=0.27) and relinquished control of the vehicle. As a result, the vehicle drifted across the right outboard road edge and the driver braked or steered in an attempt to regain control. Tire marks were left on the paved shoulder before the vehicle impacted a concrete barrier which protected a high concrete retaining wall. The barrier redirected the vehicle across the westbound travel lanes and across the median before it came to rest diagonal to the eastbound travel lanes.

ACCIDENT COLLISION DIAGRAM

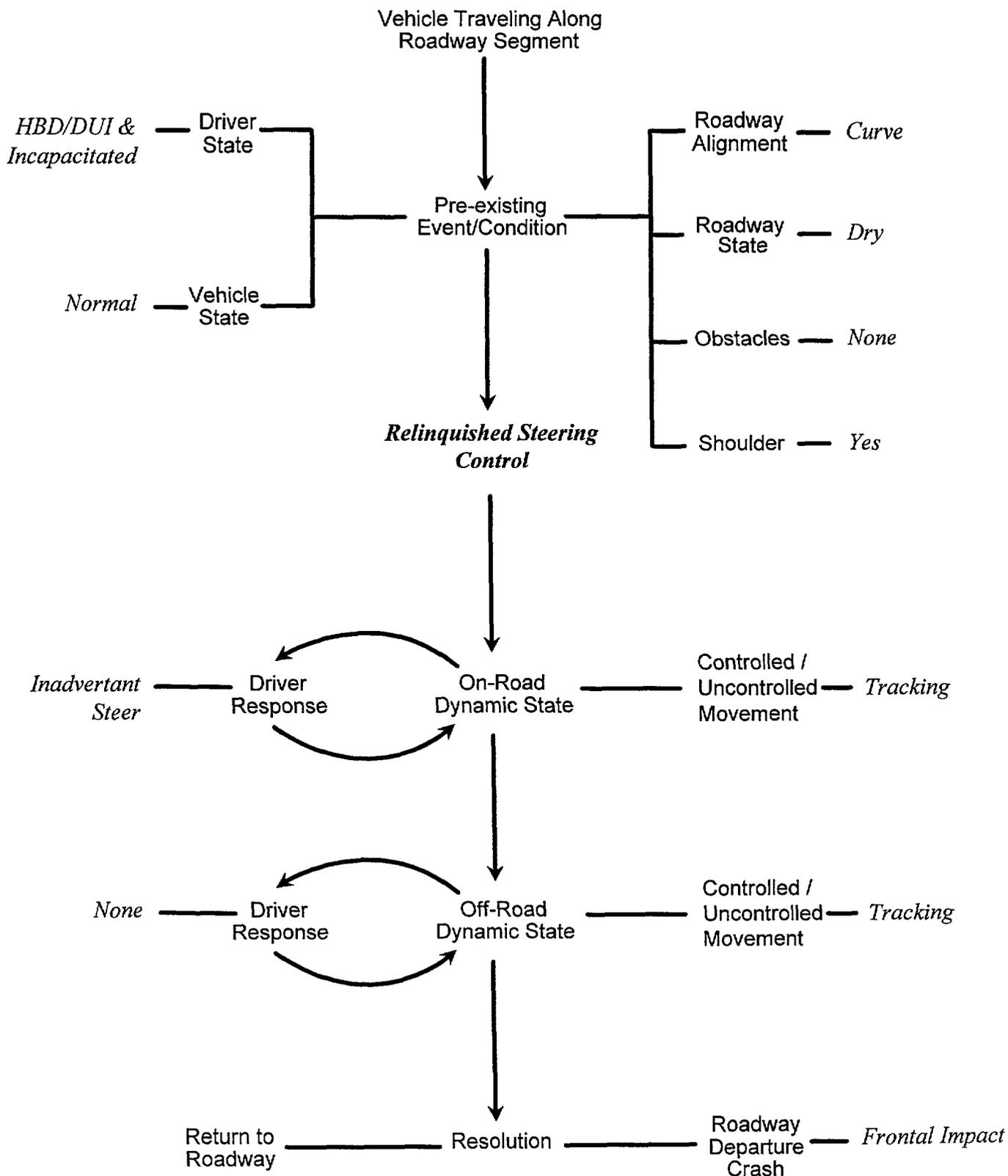
PSU No. 08

Case Number - Stratum 126H

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	7-3 -93	Weather:	Clear/Cloudy
Time:	2204	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Artificial lighting
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	37	Year:	1989
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Cavalier
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes;	3	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR= *Driver Relinquishes Steering Control - intoxicated*
ROADSIDE DEPARTURE: *Right*

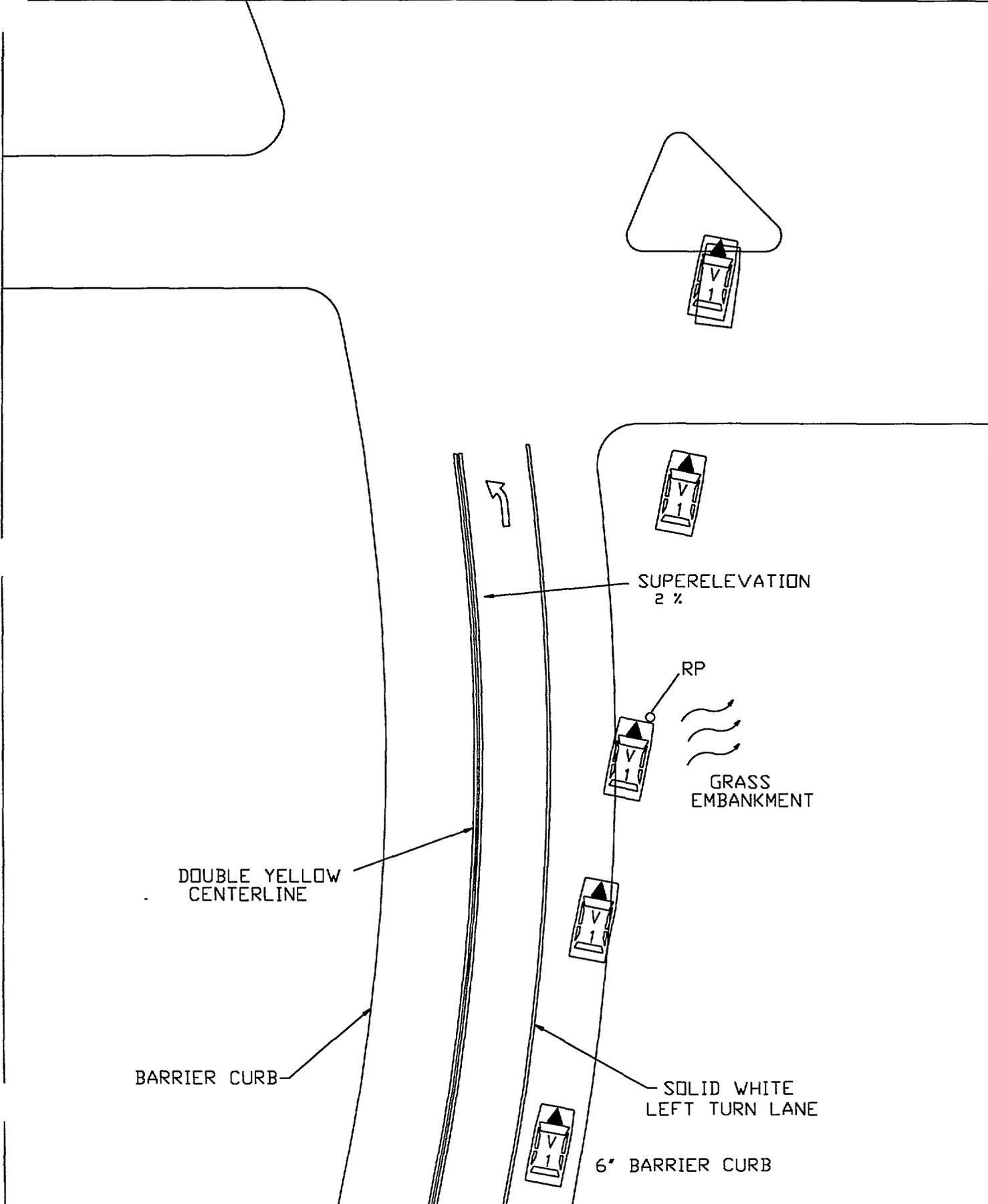
The subject vehicle was traveling in the outboard lane of a dry, three-lane, undivided, asphalt roadway that curved left with a +5% slope. Both edges of the roadway were bordered by barrier curbs and a grass embankment paralleled the west edge. The driver was intoxicated (BAC=0.17) and failed to negotiate the left curve. The vehicle departed the right road edge, sideswiped a utility pole, and traversed a grassy area. The vehicle continued for approximately 35 m across the grass before crossing an intersecting street and coming to rest at a traffic island.

ACCIDENT COLLISION DIAGRAM

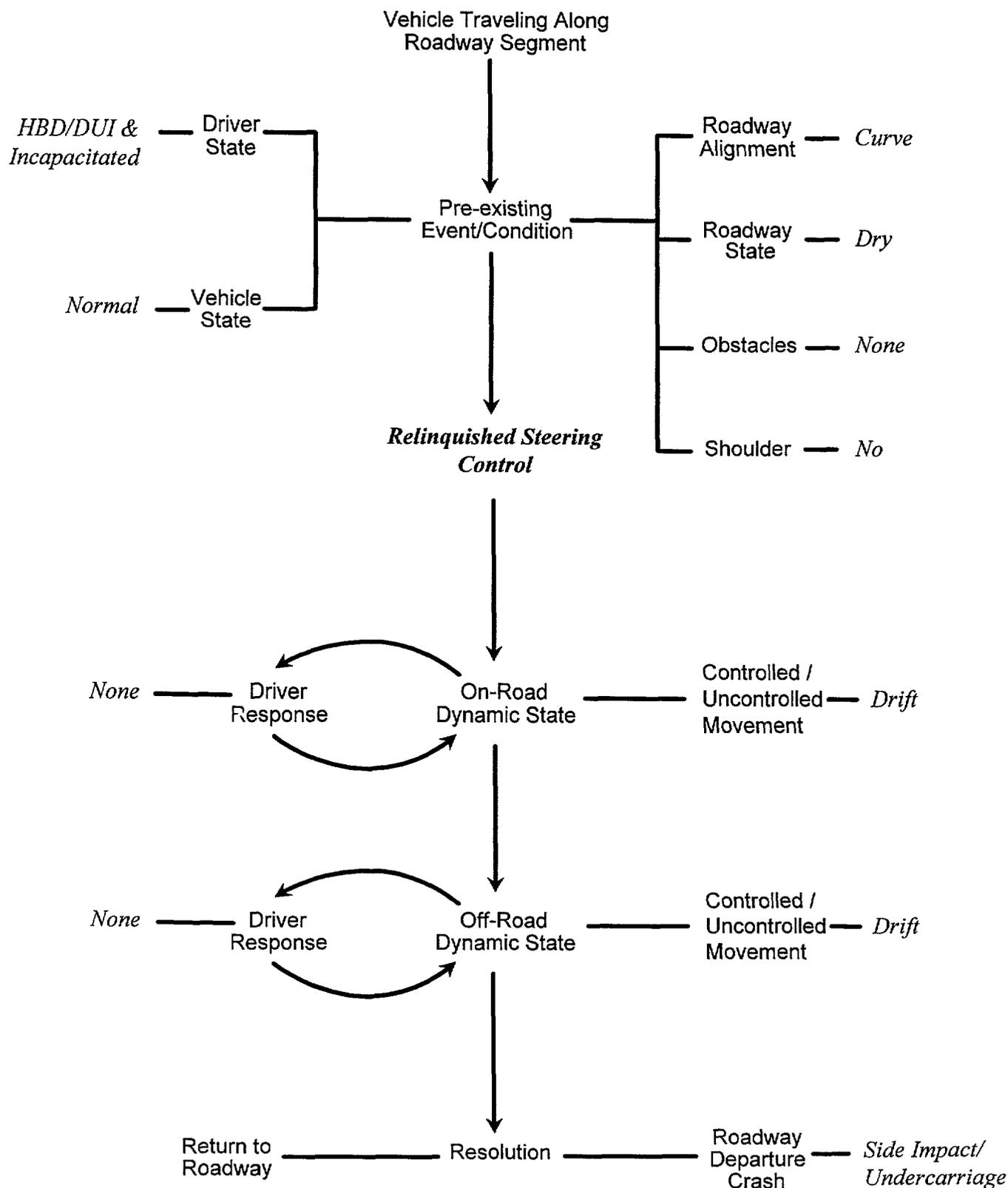
PSU No. 08

Case Number - Stratum 130G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Intoxicated
ROADSIDE DEPARTURE: Right

General Accident Information			
Dates	8-1-93	Weather:	Clear/Cloudy
Time:	0425	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Artificial lighting
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant information		Vehicle Information	
Driver Age:	33	Year:	1989
Driver Sex:	Female	Vehicle Make:	Nissan/Datsun
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Pulsar
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignmen t:	Straight
No. of Lanes:	3	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	01 Going straight		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*
ROADSIDE DEPARTURE: *Right*

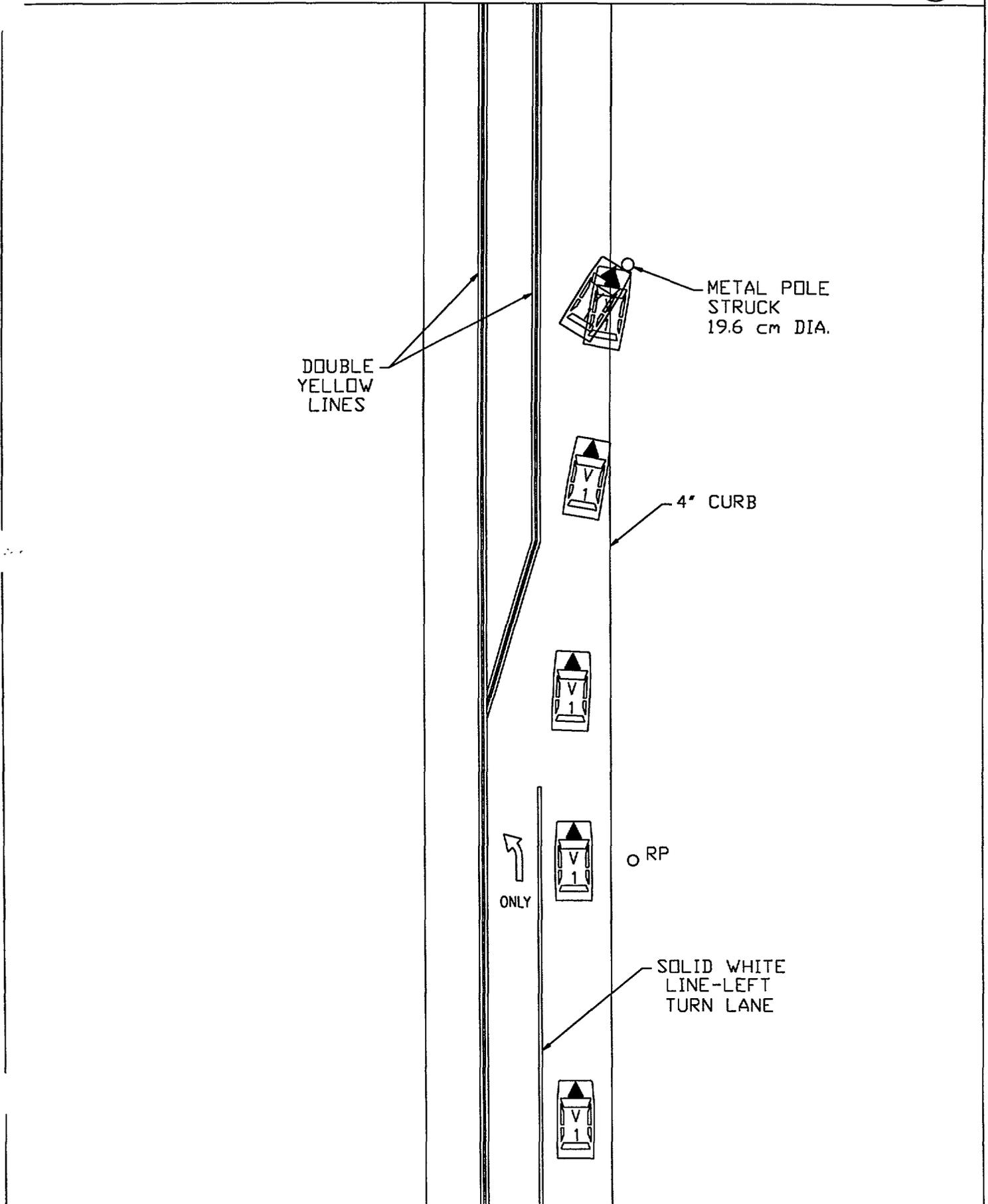
The subject vehicle was traveling after dark in the outboard lane of a lighted, straight, three-lane, urban, asphalt roadway with a +7.5% slope in a 40 km/h (25 mph) speed zone. Both edges of the road were bordered by barrier curbs with numerous trees, poles, and signs placed along the curb, approximately 0.3 m off the road. As the driver ascended the grade, the vehicle drifted to the right and mounted the barrier curb. The right frontal area impacted a small diameter tree resulting in a change in velocity of 35 km/h (22 mph). The vehicle rotated 12 degrees in a clockwise direction and came to rest against the struck tree. The driver was intoxicated (BAC unknown).

ACCIDENT COLLISION DIAGRAM

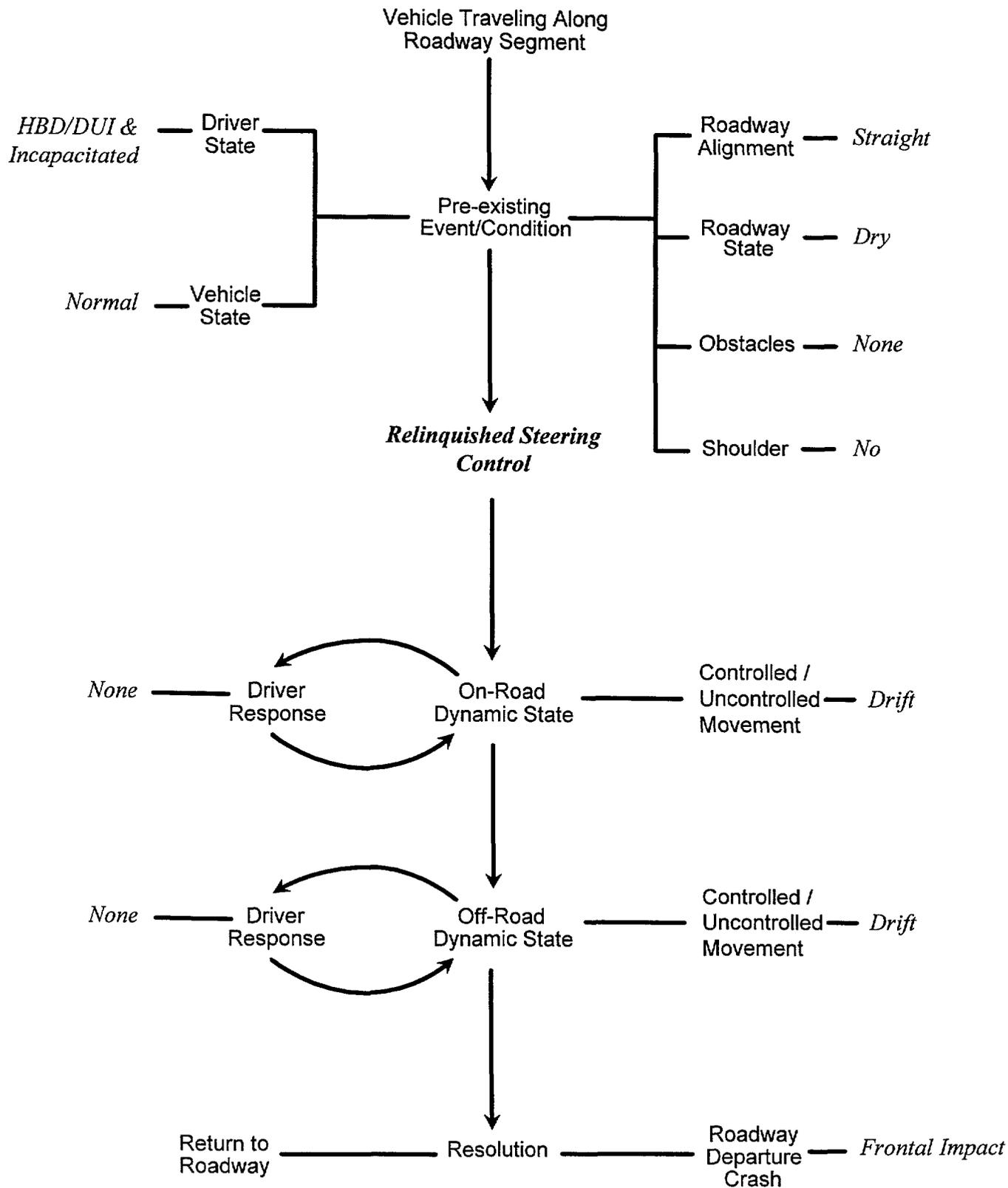
PSU No. 08

Case Number - Stratum 137E

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	1-1-93	Weather	Clear/Cloudy
Time:	0235	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	20	Year:	1989
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	F-series pickup
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Straight
No. of Lanes:	4	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
G V64:	0 1	Going straight	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR; *Vehicle Speed - Speed and Alcohol*
ROADSIDE DEPARTURE: *Right*

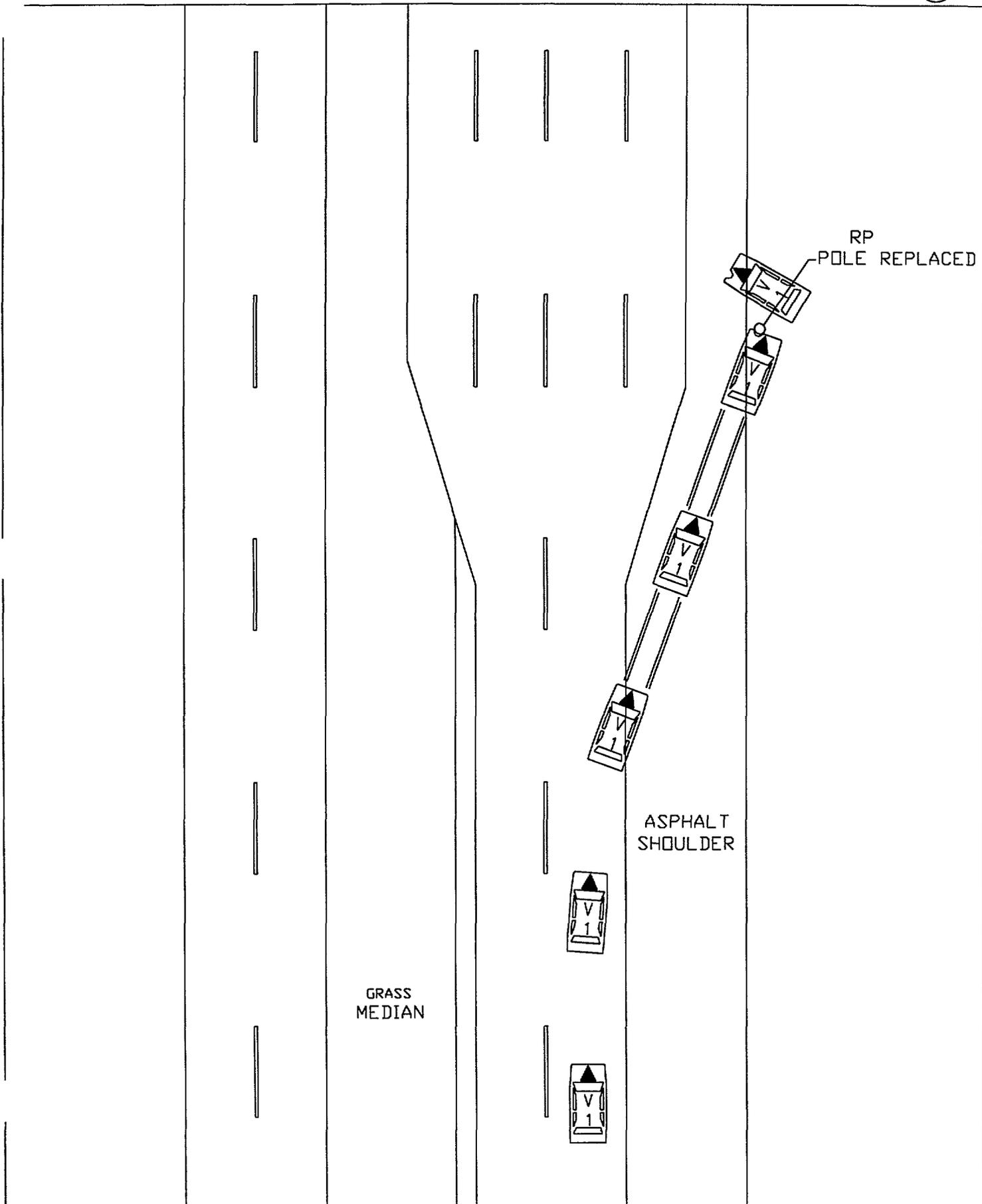
The subject vehicle was traveling east on a straight, six-lane, divided, highway when the driver departed the right edge of the road as the result of being under the influence of alcohol and driving at a high rate of speed. The driver locked the brakes in an attempt to avoid striking a utility pole located on the grassy area adjacent to the asphalt shoulder. The pole sheared at the base and the vehicle rotated in counterclockwise direction before coming to rest heading in a northerly direction. The causal factor was vehicle speed and alcohol consumption.

ACCIDENT COLLISION DIAGRAM

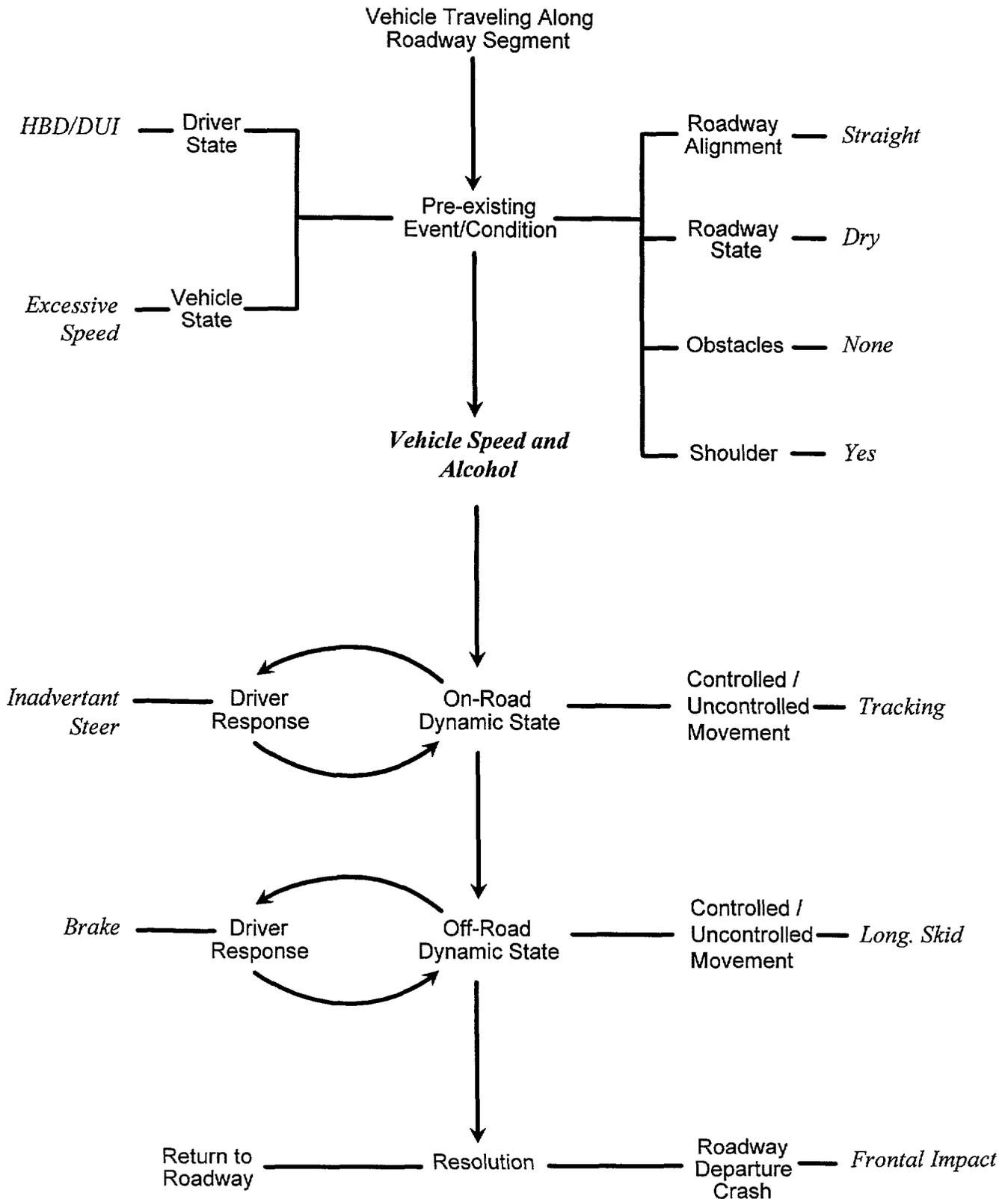
PSU No. 09

Case Number - Stratum 004D

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	1-1-93	Weather:	Clear/Cloudy
Time:	0220	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3(A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	19	Year:	1984
Driver Sex:	Female	Vehicle Make:	Ford
Impairment:	Fell Asleep	Vehicle Model:	Tempo
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Fell Asleep*

ROADSIDE DEPARTURE: *Right*

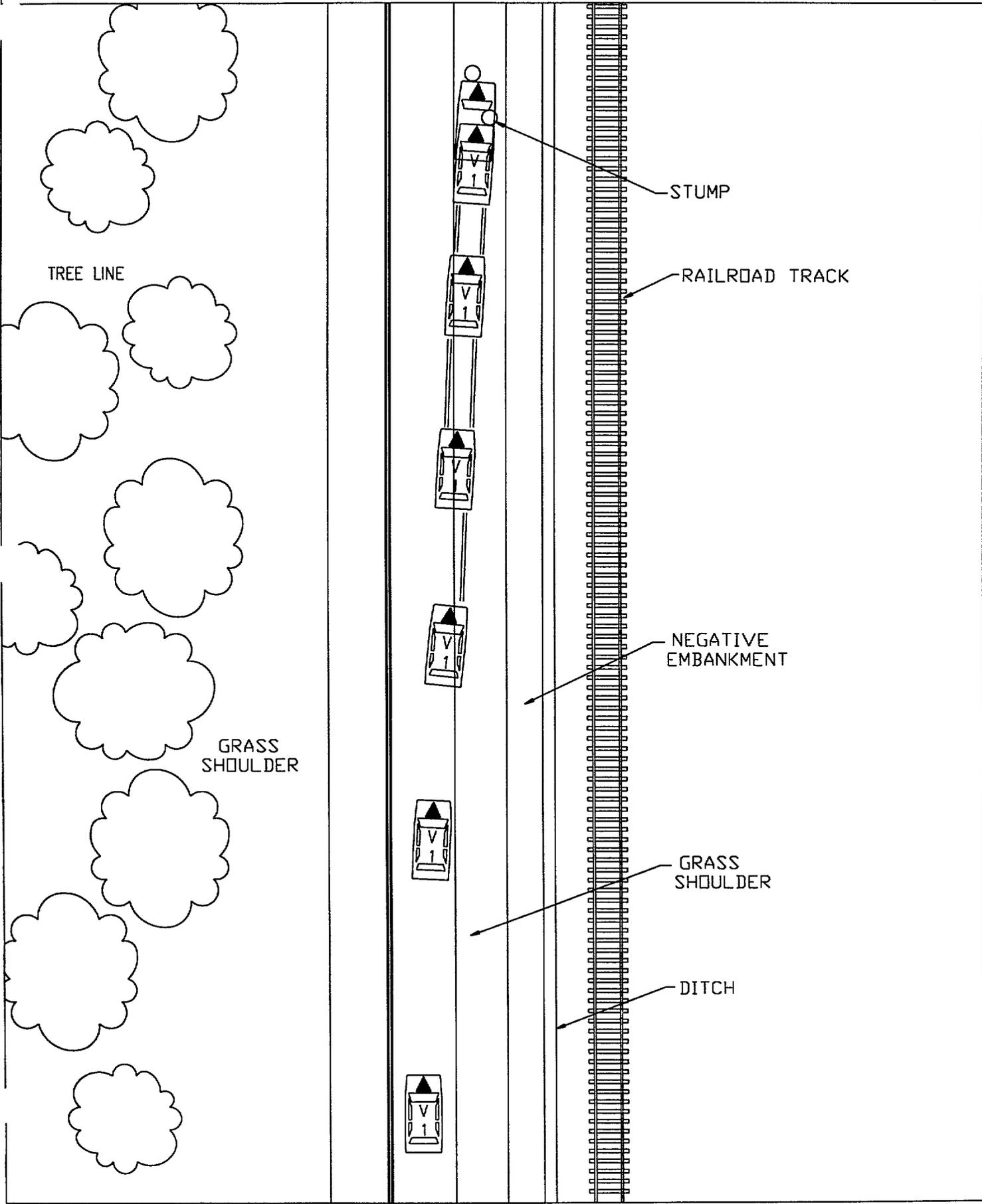
The subject vehicle drifted off the right road edge of a dry, straight, two-lane, undivided, asphalt roadway with a +2% slope. The roadway was dark and not illuminated by street lights. The vehicle traveled 36 m along the grassy shoulder before striking a tree with its frontal plane. The driver fell asleep prior to the roadway departure. The causal factor was that the driver fell asleep and relinquished control of the vehicle.

ACCIDENT COLLISION DIAGRAM

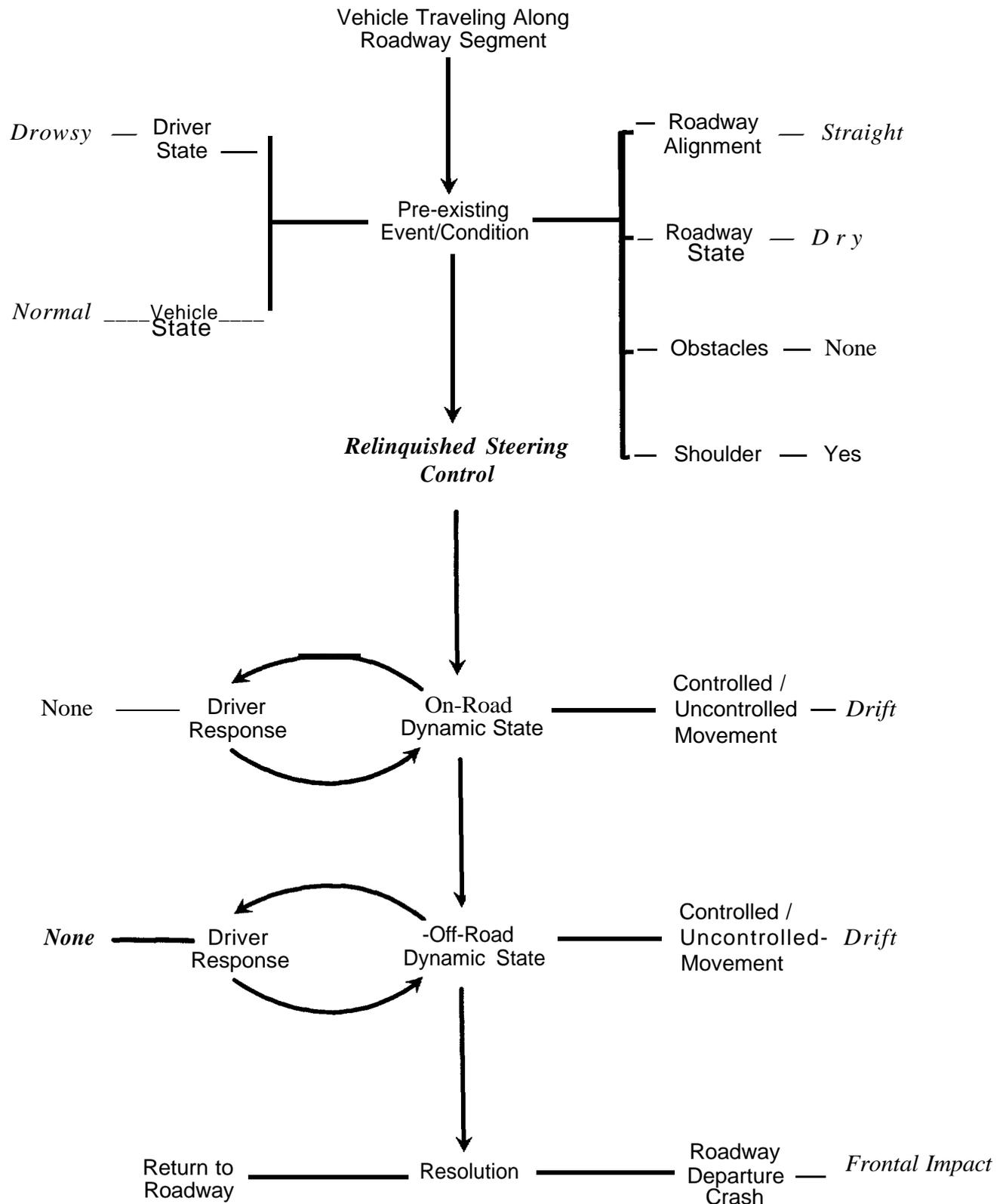
PSU No. 09

Case Number - Straturn 006K

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	2-1-93	Weather:	Clear/Cloudy
Time:	0720	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	31	Year:	1982
Driver Sex:	Male	Vehicle Make:	Plymouth
Impairment:	None	Vehicle Model:	Gran Fury
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	4	Slope:	Grade
		Speed Limit:	64 km/h
Cluster Variables			
GV14:	99	Unknown	
G V64:	13	Negotiating a curve	
GV65:	12	This vehicle traveling off the edge of the road on the left side	
GV66:	9	Precrash stability unknown	
GV67:	9	Directional consequences unknown	

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Left*

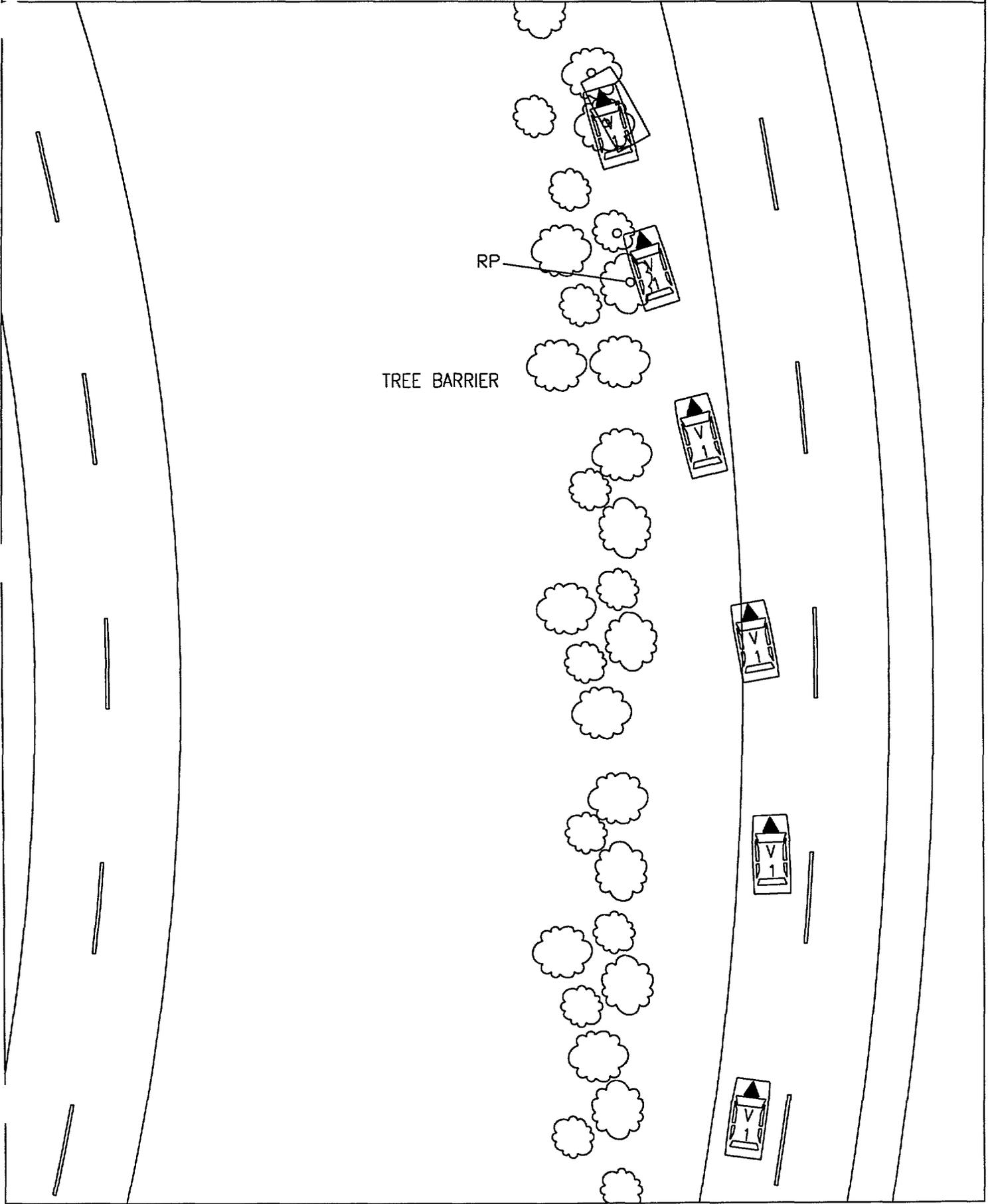
The subject vehicle was traveling westbound in the left lane during daylight on a dry, four-lane, divided, asphalt roadway that curved to the left. The driver was inattentive to the driving task and drifted off the left roadway edge. The vehicle traveled approximately 20 m along the 2.5 m wide median grassy shoulder prior to striking a tree with the vehicle's left side plane. The vehicle continued along the shoulder and struck three additional trees. The driver did not apply the brakes prior to the final impact. There were no sight line restrictions or roadway obstructions. The causal factor was that the driver was inattentive to the driving task and drifted off the left side of the roadway.

ACCIDENT COLLISION DIAGRAM

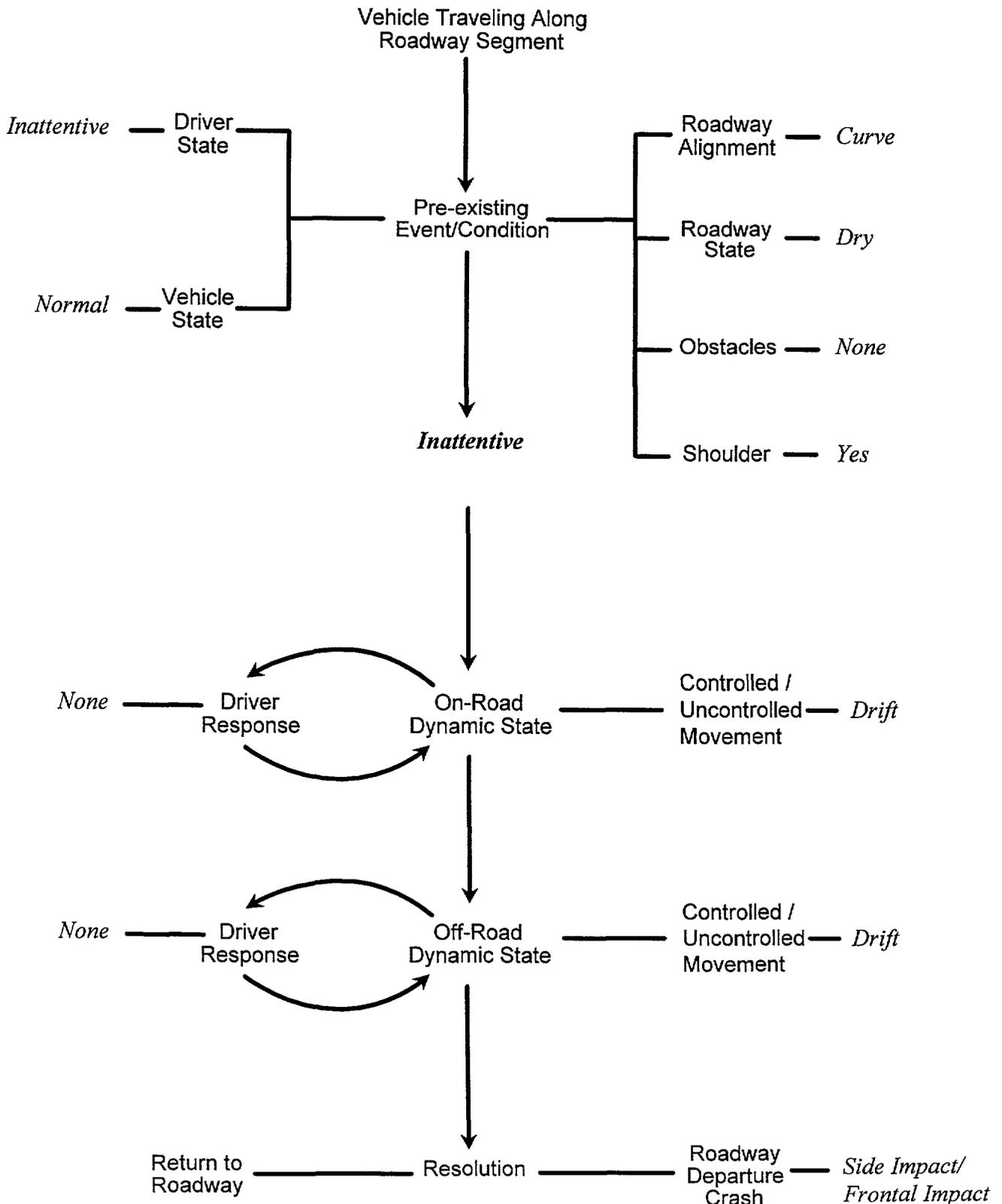
PSU No. 09

Case Number - Stratum 020D

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver inattention*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	2-6-93	Weather:	Clear/Cloudy
Time:	1446	Surface Condition:	<i>Dry</i>
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	17	Year:	1975
Driver Sex:	Female	Vehicle Make:	Nissan/Datsun
Impairment:	None	Vehicle Model:	Z-car, ZX
Familiarity with Road:	Unknown	ABS:	<i>No</i>
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Straight
No. of Lanes:	4	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	99 Unknown		
G V64:	0 1 Going straight		
GV65:	10 This vehicle traveling over the lane line on left side of travel lane		
GV66:	9 Precrash stability unknown		
GV67:	9 Directional consequences unknown		

CAUSAL FACTOR: *Driver inattention*

ROADSIDE DEPARTURE: *Left*

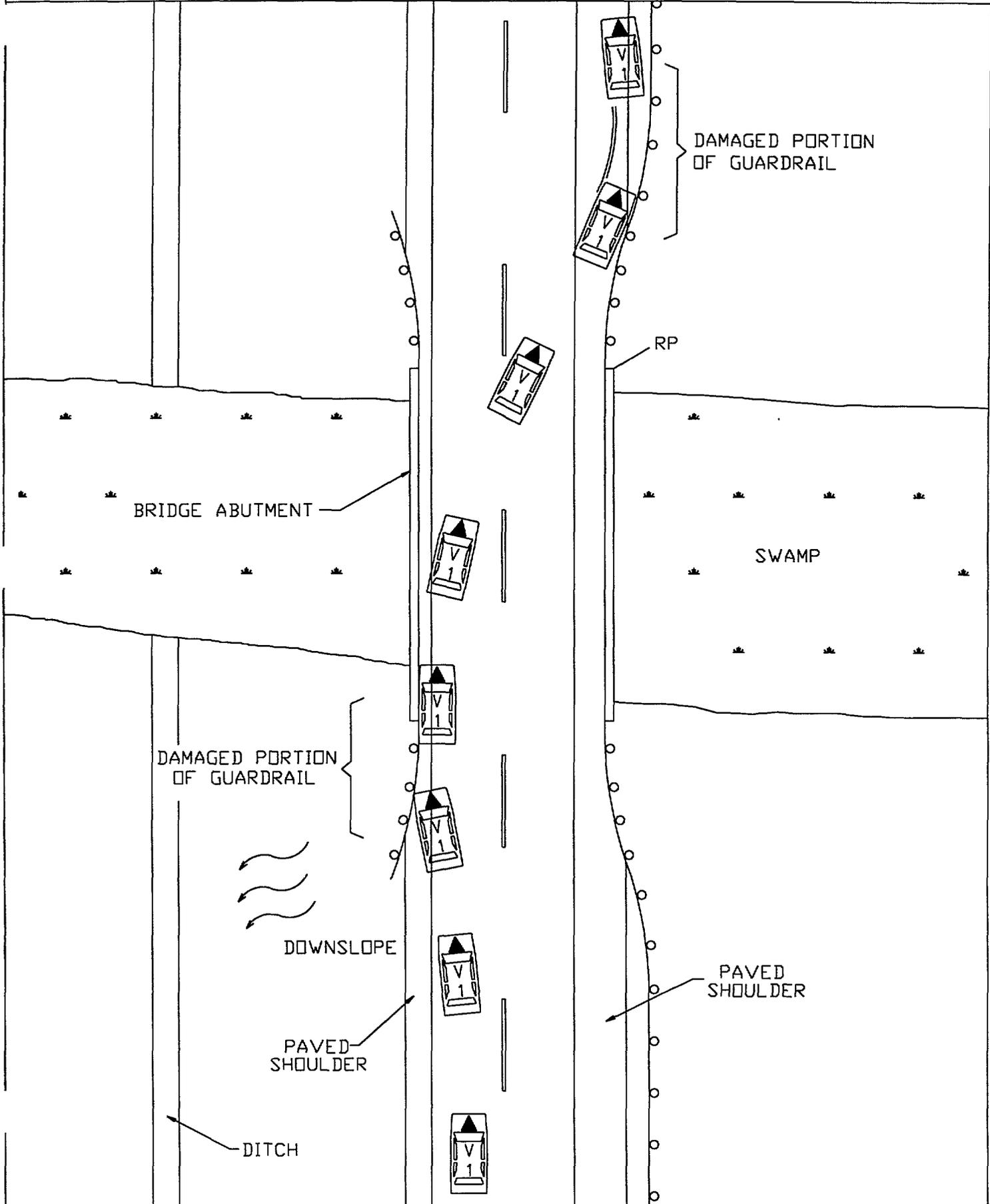
The subject vehicle was traveling during daylight hours on a dry, straight, level, four-lane, divided, asphalt roadway when the driver became inattentive to the driving task and drifted off the inboard road edge. The vehicle traveled approximately 20 m on the 1.3 m wide asphalt shoulder before impacting a W-beam guardrail. The vehicle returned to the travel lanes and departed the right roadway edge line striking another guardrail. The vehicle separated from this guardrail and came to rest on the shoulder next to the guardrail. There were no adverse weather conditions and no sight line restrictions. The causal factor was driver inattention.

ACCIDENT COLLISION DIAGRAM

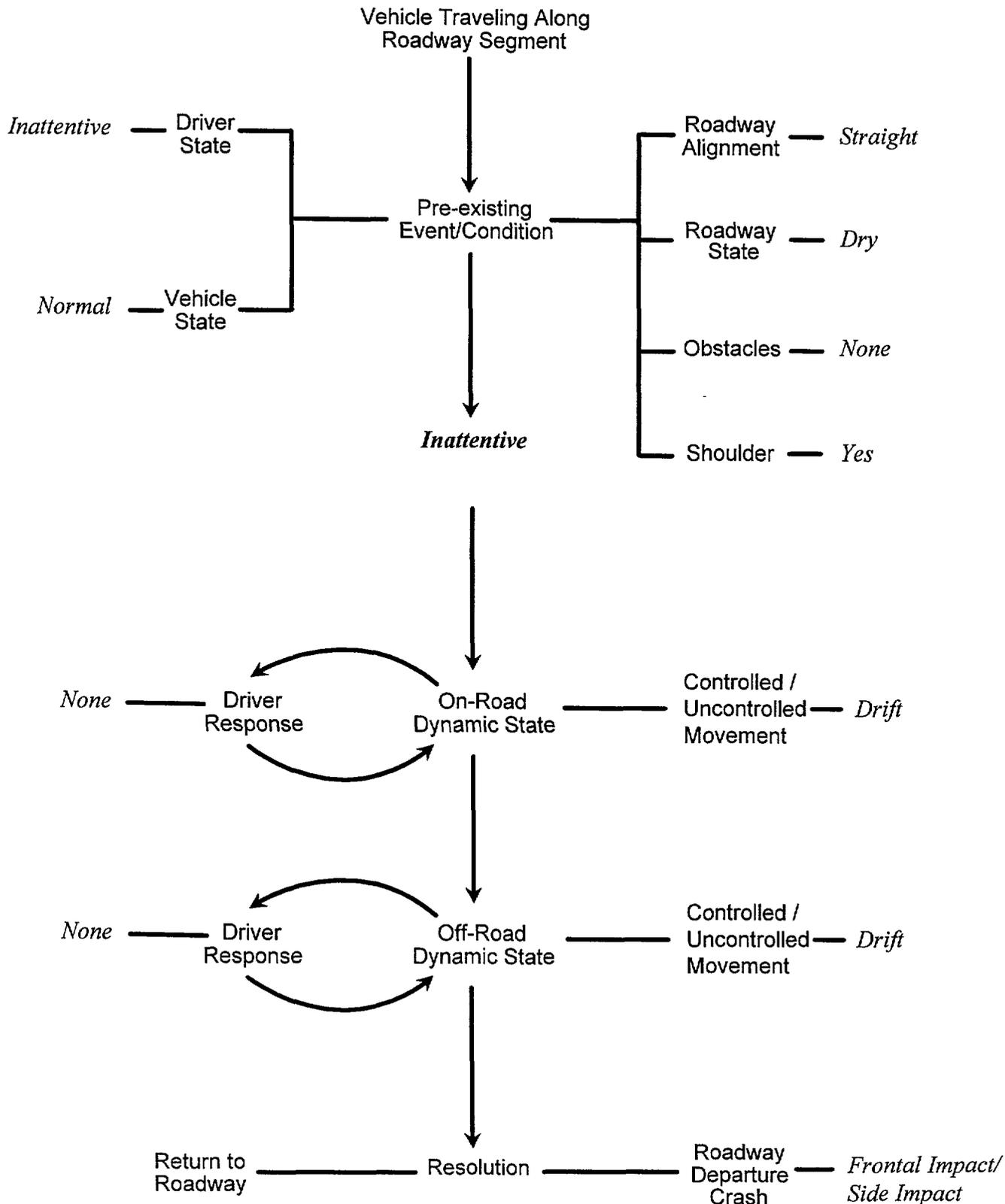
PSU No. 09

Case Number - Stratum 022K

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Intoxicated
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-6-93	Weather:	Clear/Cloudy
Time:	0008	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3(A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	25	Year:	1993
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Mustang/ Mustang II
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	56 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*
ROADSIDE DEPARTURE: *Right*

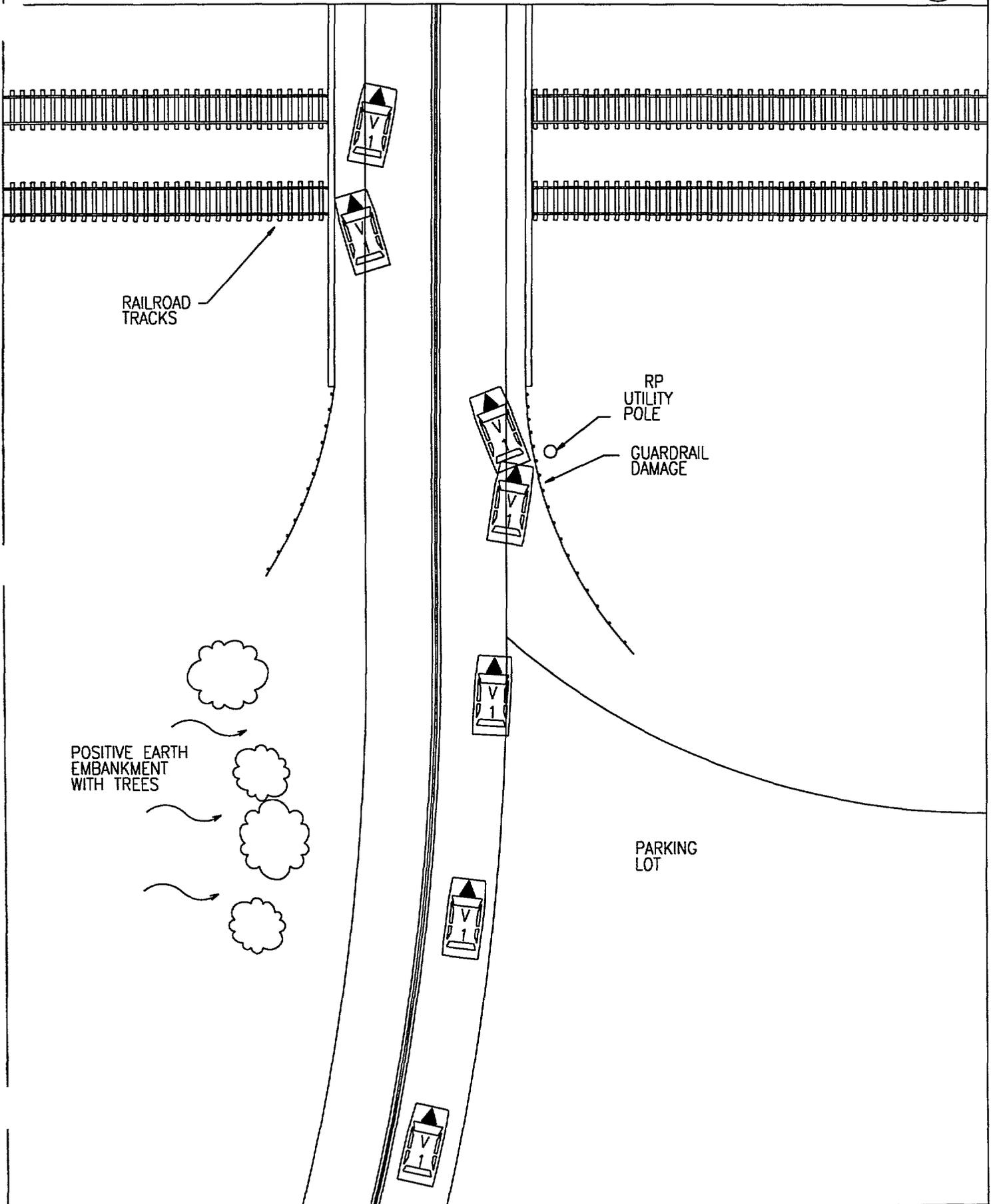
The subject vehicle was traveling in an easterly direction on a dry, two-lane, asphalt roadway during nighttime hours. The driver was intoxicated (BAC=0.29) and attempted to negotiate a moderate left curve at an unknown, but reasonable rate of speed. The vehicle drifted off the right road edge in a tracking mode and impacted a W-beam guardrail in a right sideswipe configuration. The guardrail redirected the vehicle across the roadway where it impacted a bridge rail. There was no edge line in the area of the initial road departure and no reflective markers or delineators.

ACCIDENT COLLISION DIAGRAM

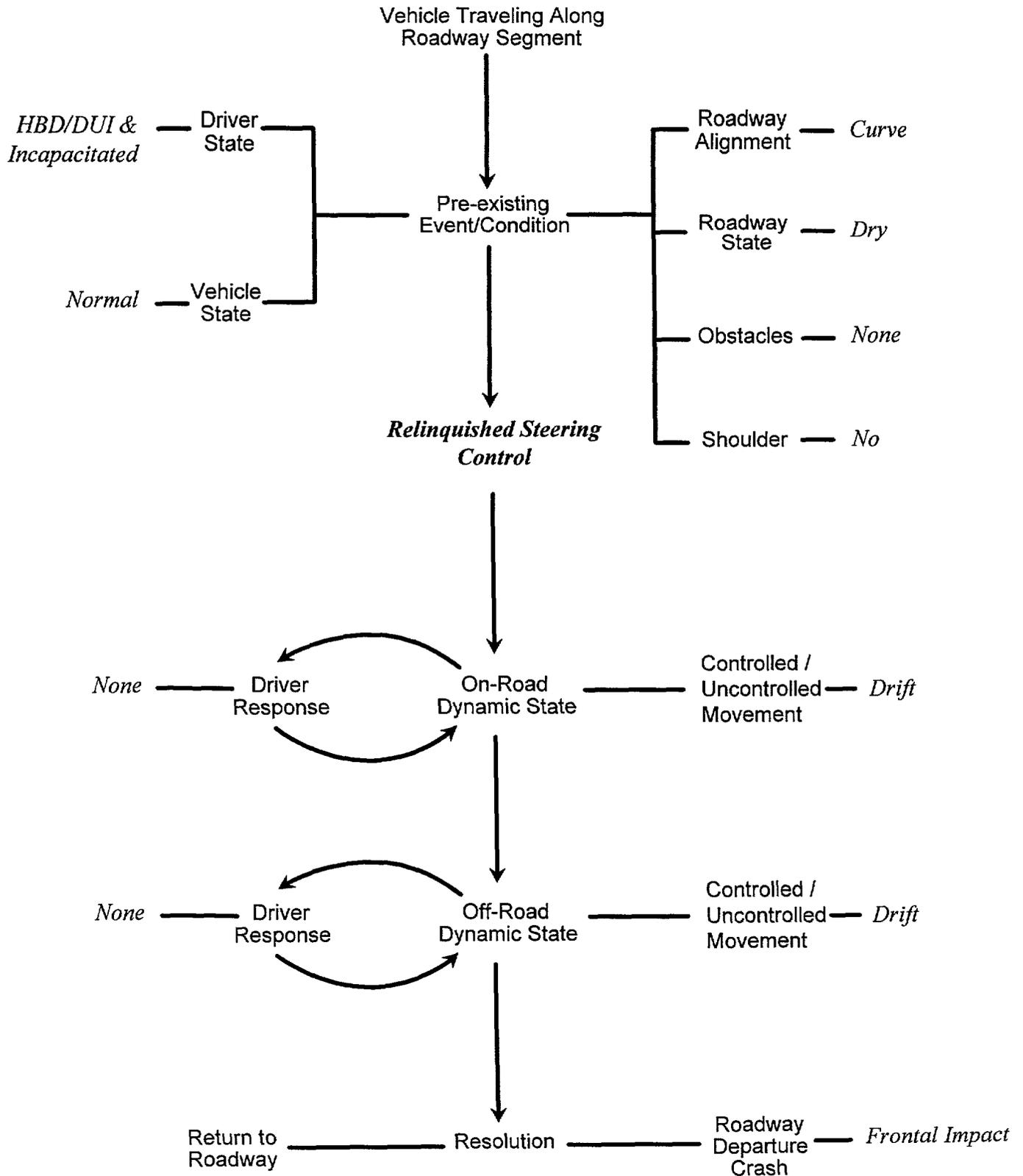
PSU No. 09

Case Number - Stratum 114J

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Intoxicated
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	I-6-93	Weather:	Clear/Cloudy
Time:	0205	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	4 (K)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	23	Year:	1988
Driver Sex:	Male	Vehicle Make:	Buick
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Regal
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	6	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
G V64:	13	Negotiating a curve	
GV65:	11	This vehicle traveling over the lane line on right side of travel lane	
G V66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*

ROADSIDE DEPARTURE: *Right*

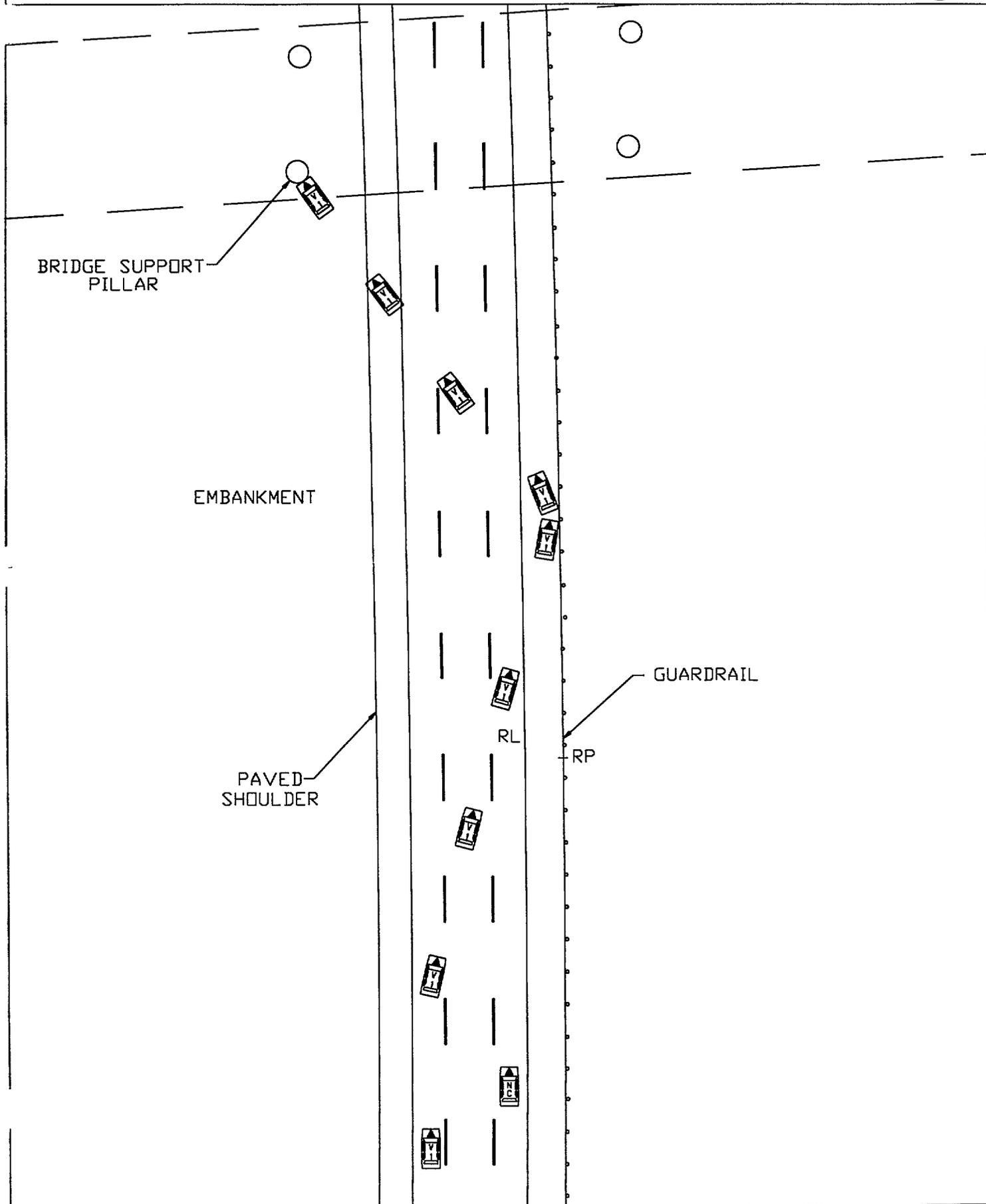
The subject vehicle was westbound on a level, six-lane, divided, concrete roadway which curved left. The roadway was dark with no artificial illumination. The driver had consumed alcohol and was swerving from lane to lane, traveling at a high rate of speed. The vehicle drifted off the right side of the roadway and struck a guardrail. The vehicle was redirected onto the roadway, where it crossed the three travel lanes and struck a bridge support post in the median. The driver did not apply brakes prior to the guardrail impact. The right roadway edge was striped with a solid white edge line which was in good condition. A rumble strip was present on the shoulder adjacent to the roadway edge line. The causal factor was excessive vehicle speed in combination with alcohol consumption.

ACCIDENT COLLISION DIAGRAM

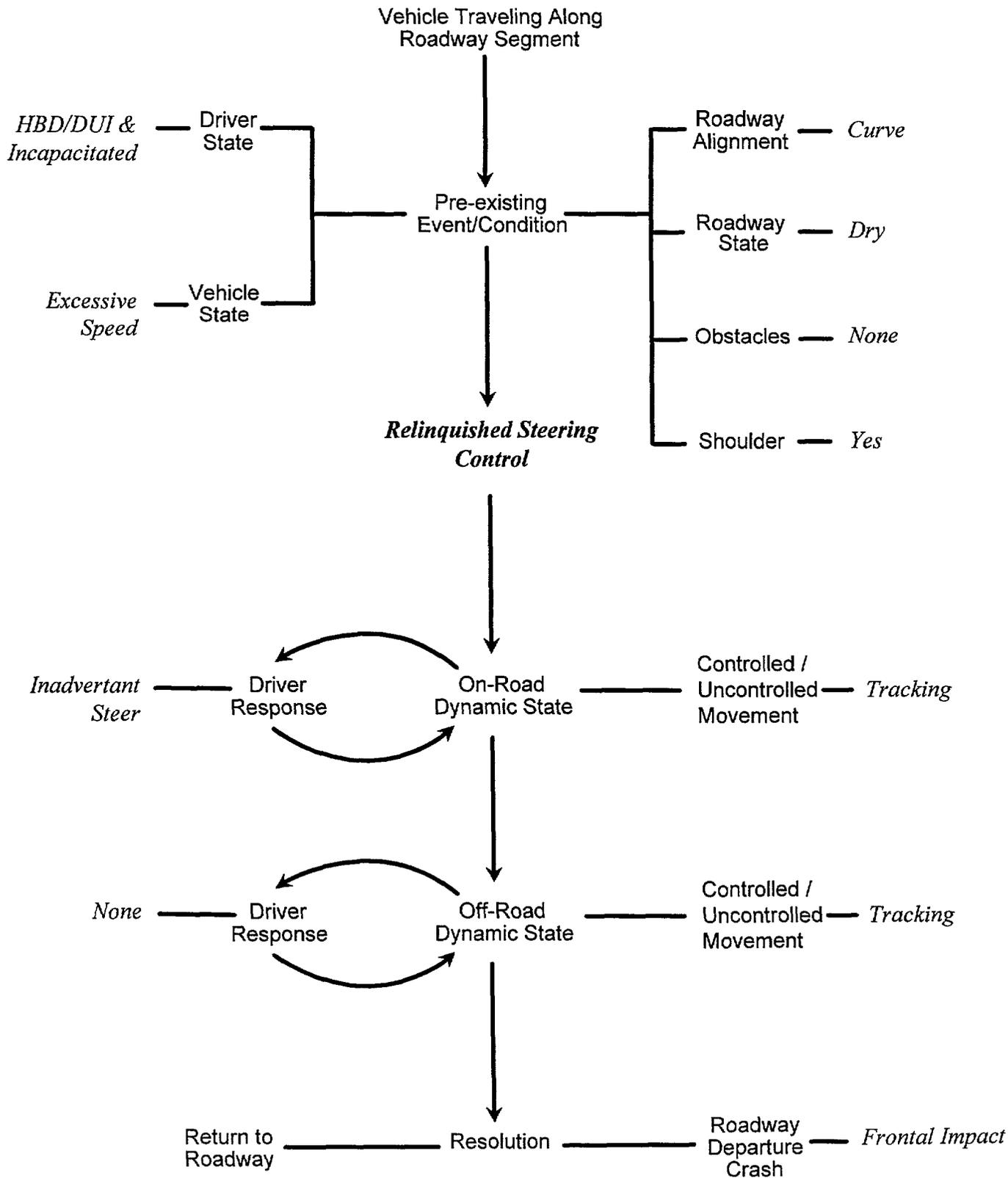
PSU No. 11

Case Number - Stratum 001B

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	1-7-93	Weather	Clear/Cloudy
Time:	1845	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	47	Year:	1978
Driver Sex:	Male	Vehicle Make:	Buick
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	LeSabre
familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	4	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
G V64:	14 Changing lanes		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*
ROADSIDE DEPARTURE: *Right*

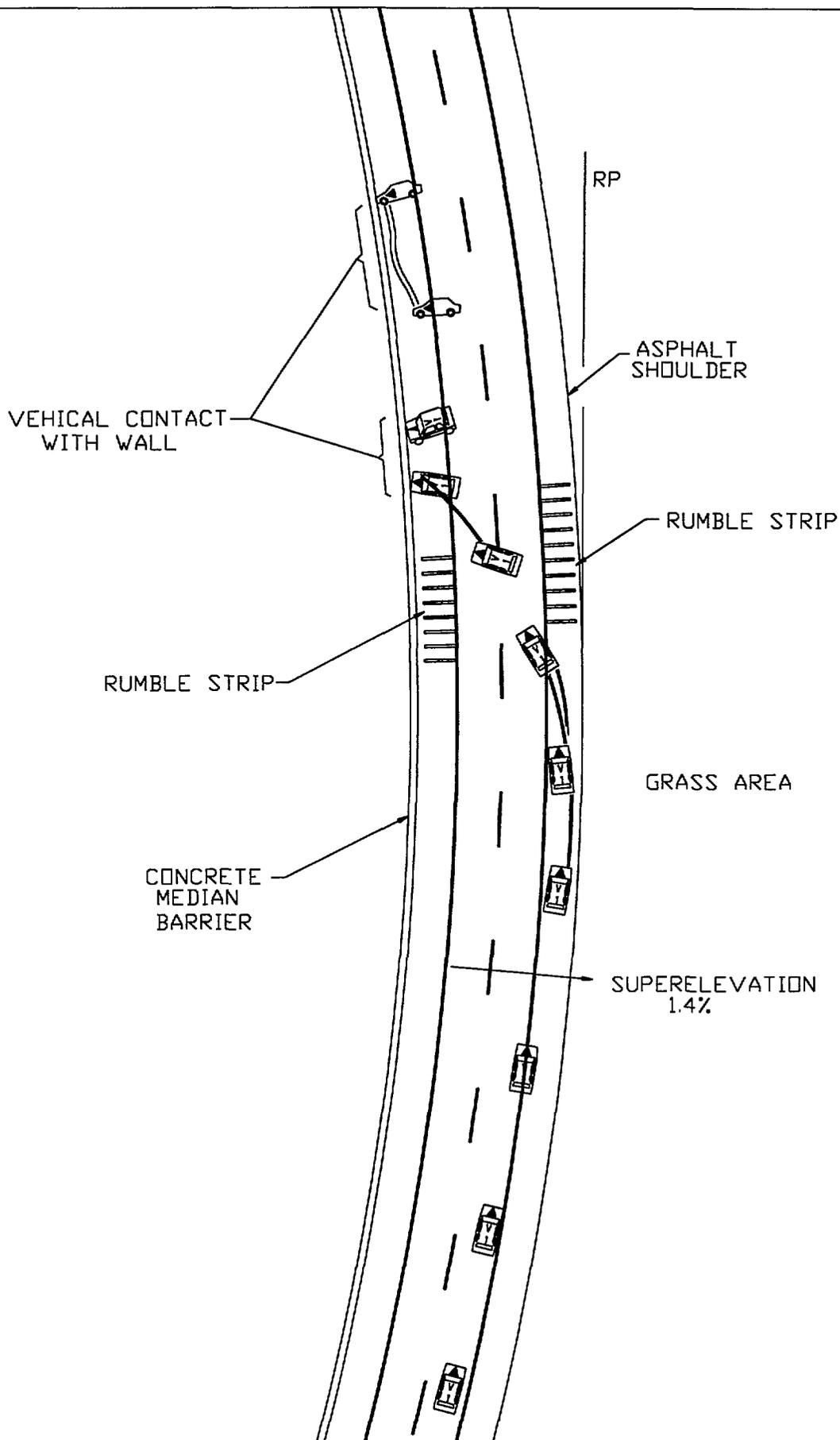
The subject vehicle was traveling eastbound in the left lane of a dry, level, unlit, superelevated, four-lane divided asphalt roadway that curved left. The driver swerved to the right departing the right roadway edge line and then counter-steered to the left. The vehicle subsequently rotated counterclockwise and re-entered the travel lanes striking the concrete median barrier with the frontal plane. The driver was intoxicated with a 0.2 BAC. The causal factor was roadway departure due to driver intoxication.

ACCIDENT COLLISION DIAGRAM

PSU No. 11

Case Number - Stratum 002K

Indicate North



CAUSAL FACTOR: Vehicle Speed - Other
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	2-3-93	Weather:	Snow/Sleet/Hail
Time:	0650	Surface Condition:	Wet
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	27	Year:	1991
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Geo Tracker
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Right
No. of Lanes:	4	Slope:	Level
		Speed Limit:	105 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	13 Negotiating a curve		
GV65:	05 This vehicle loss of control due to poor road conditions		
GV66:	4 Skidding laterally - counterclockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: Vehicle *Speed - Other*
ROADSIDE DEPARTURE: *Left*

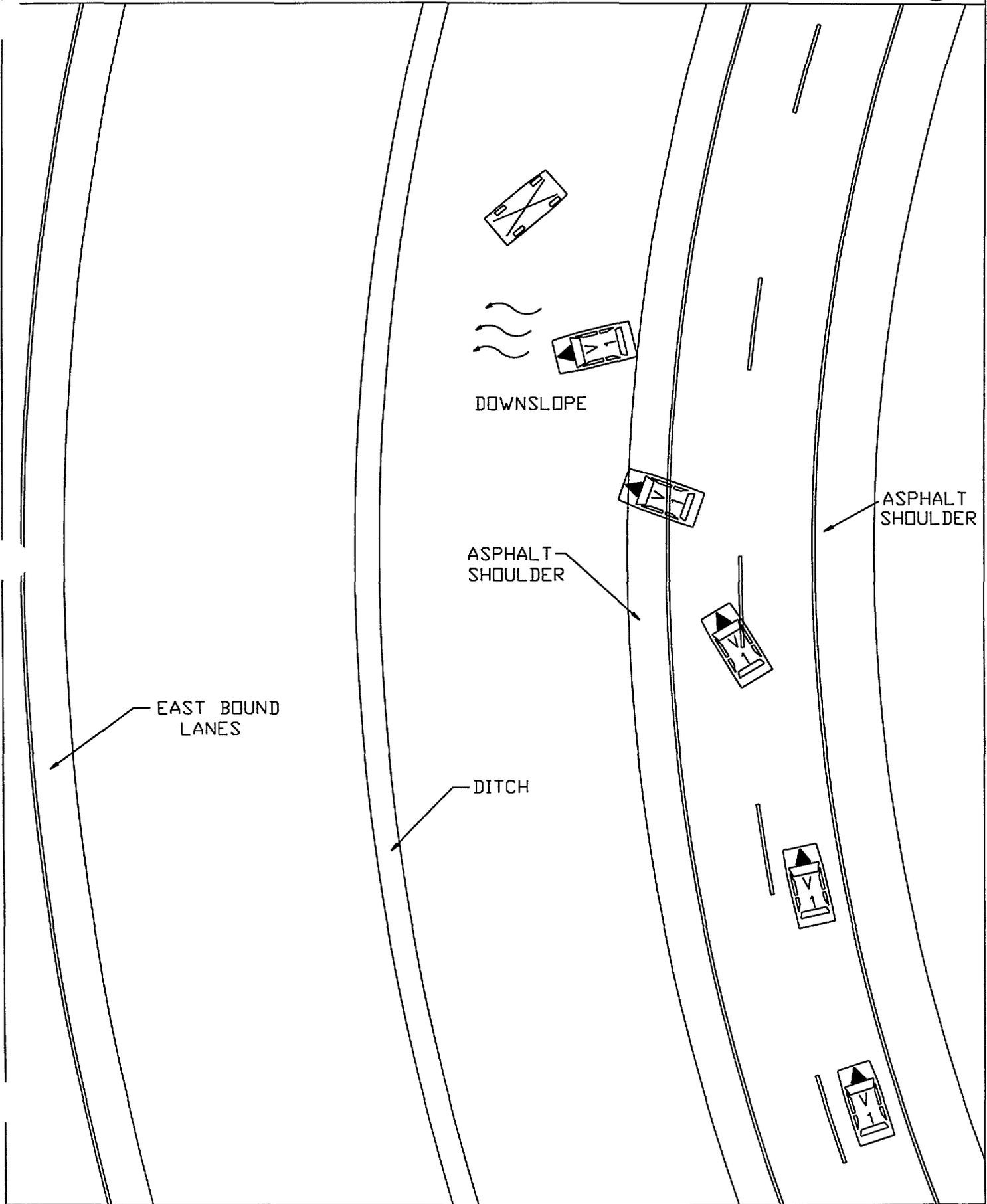
The subject vehicle was traveling at dawn on a wet (snowing), four-lane, divided, concrete interstate roadway that curved to the right. The driver was traveling too fast for conditions in the right lane and lost control. The vehicle rotated counterclockwise and departed the left roadside. The vehicle continued onto the grass median and rolled over. The driver, after attempting to counter-steer when initially losing control, let go of the steering wheel, relinquishing control of the vehicle. The causal factor was speed to fast for conditions.

ACCIDENT COLLISION DIAGRAM

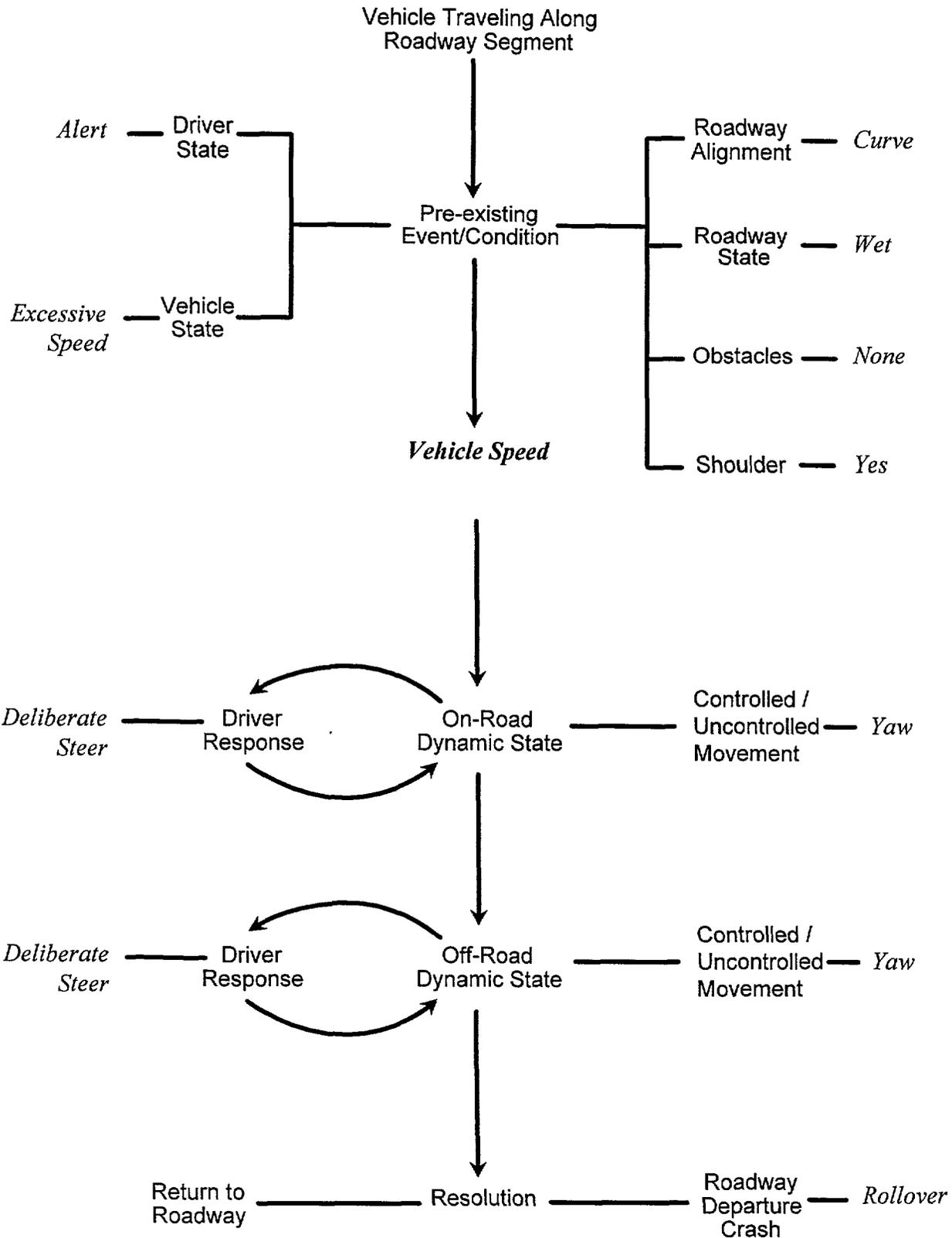
PSU No. 11

Case Number - Stratum 045G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	2-7-93	Weather:	Clear/Cloudy
Time:	0313	Surface Condition:	Ice/Snow
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	20	Year:	1986
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Escort/EXP
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	5	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
G V14:	03 Braking (lockup)		
GV64:	13 Negotiating a curve		
GV65:	05 This vehicle loss of control due to poor road conditions		
GV66:	3 Skidding laterally - clockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Excessive*

ROADSIDE DEPARTURE: *Left*

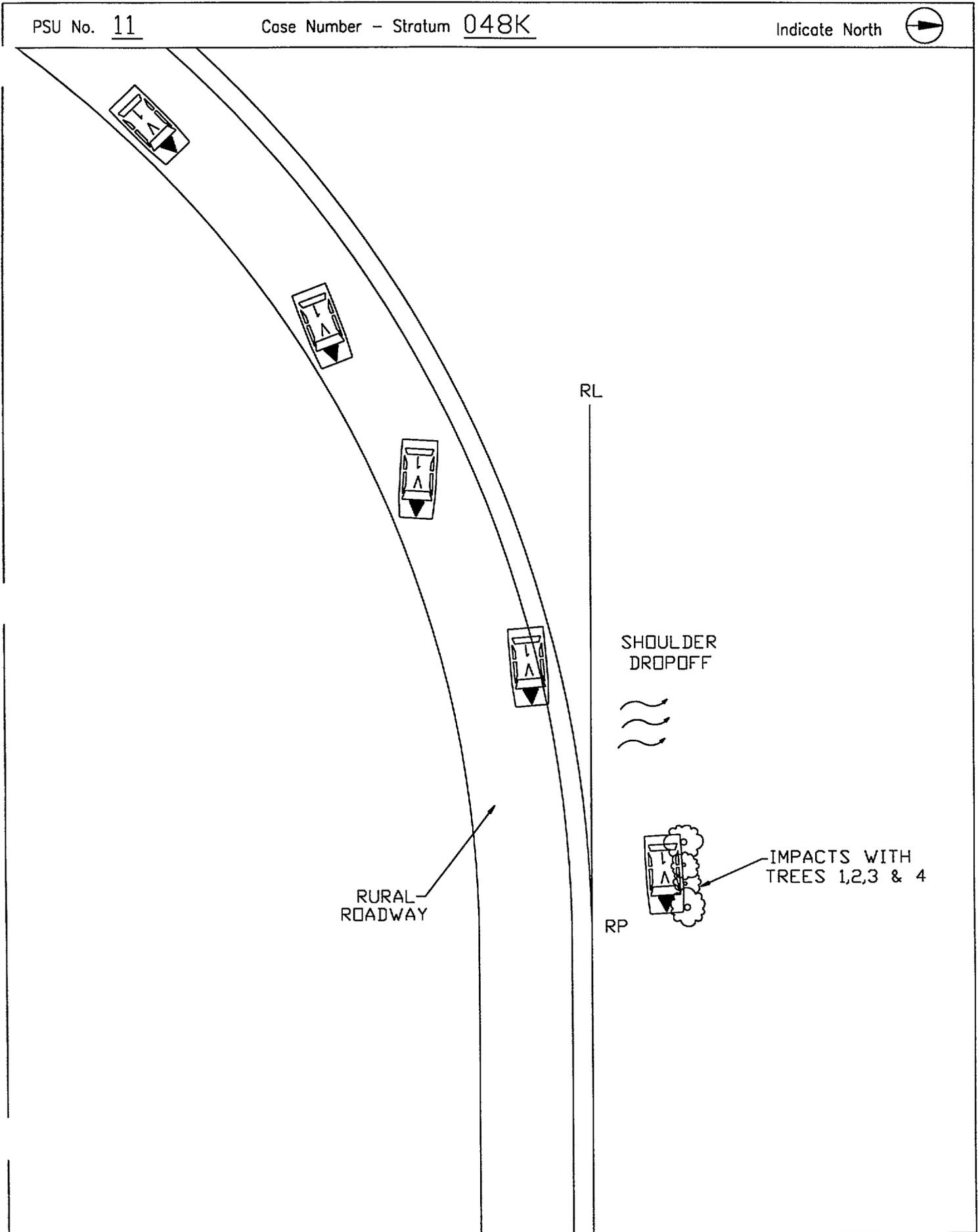
The subject vehicle was traveling east in a right curve section of an icy, rural, two-lane, dirt roadway with a -6.5% slope. The driver lost directional control. The vehicle departed the left side of the roadway and struck trees with its left side plane. The roadside afforded minimal lateral recovery distance due to the drop off beyond the shoulder which was approximately 1 m wide. The driver had been drinking which contributed to the crash. The causal factor was a combination of the vehicle traveling too fast for conditions and alcohol consumption.

ACCIDENT COLLISION DIAGRAM

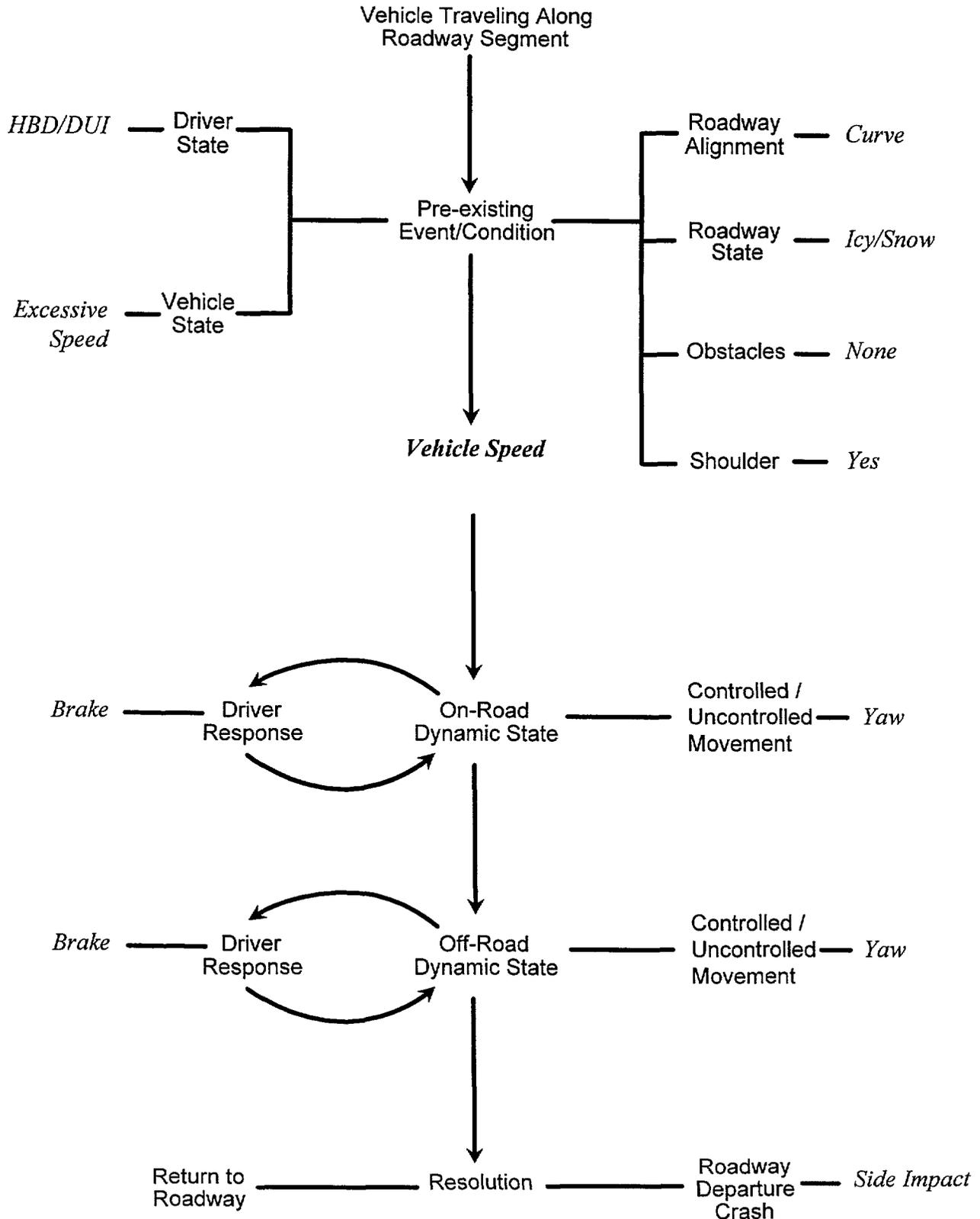
PSU No. 11

Case Number - Stratum 048K

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-6-93	Weather:	Clear/Cloudy
Time:	1650	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	4 (K)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	47	Year:	1984
Driver Sex:	Female	Vehicle Make:	Lincoln
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Continental/ Town Car
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	80 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*

ROADSIDE DEPARTURE: *Right*

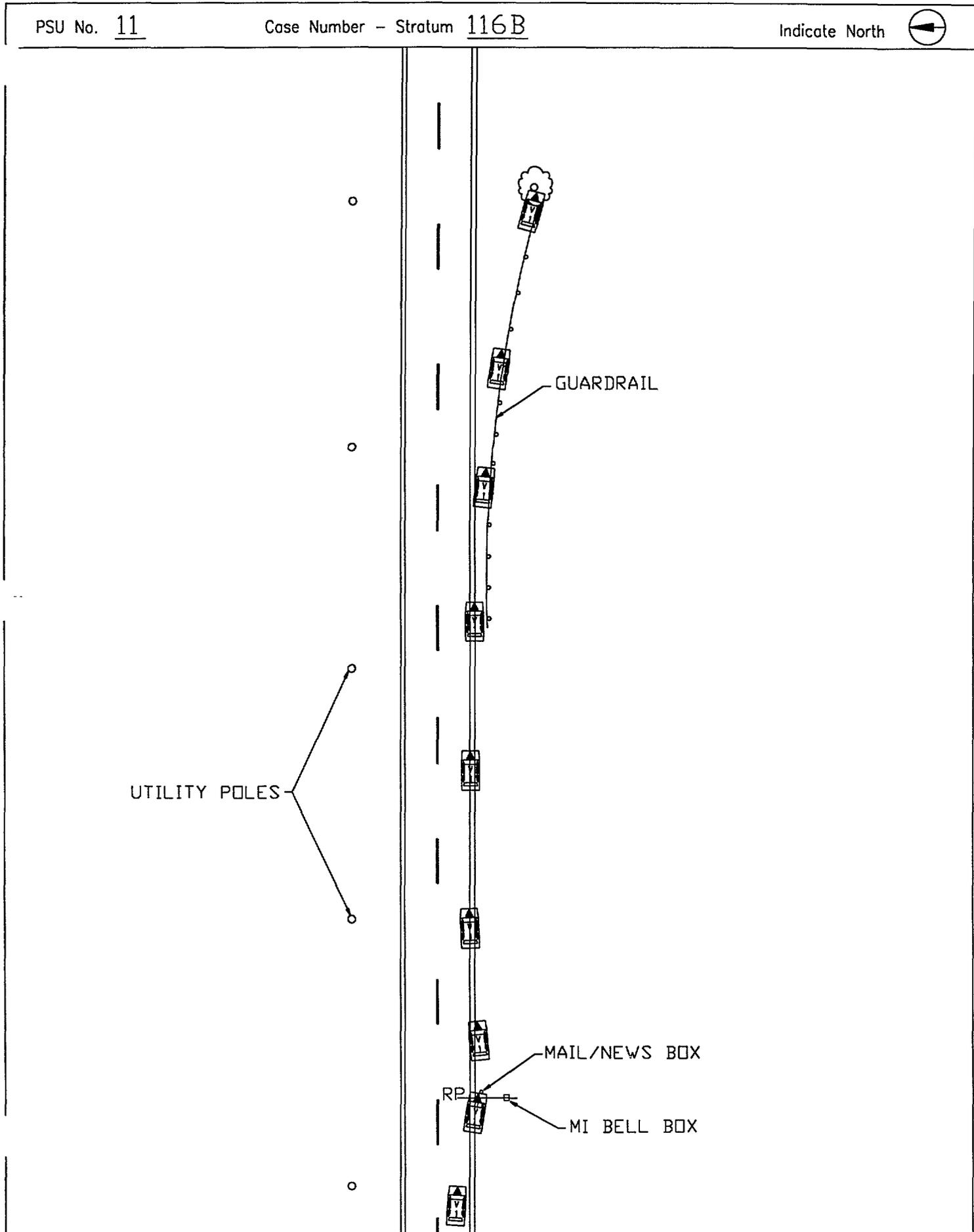
The subject vehicle was traveling in an easterly direction on a dry, straight, level, rural, two-lane, asphalt roadway. The vehicle drifted off the right road edge in a tracking mode, impacted a mailbox post, and continued traveling along the right road edge for 90 m until the center frontal area impacted a large diameter tree. The roadway's solid white edge lines and broken yellow center line were in poor condition. The speed limit of the roadway was 80 km/h (50 mph). The Delta V was computed at 121 km/h (75 mph). The driver was intoxicated (BAC=0.20) and, according to witnesses, swerving from lane to lane.

ACCIDENT COLLISION DIAGRAM

PSU No. 11

Case Number - Stratum 116B

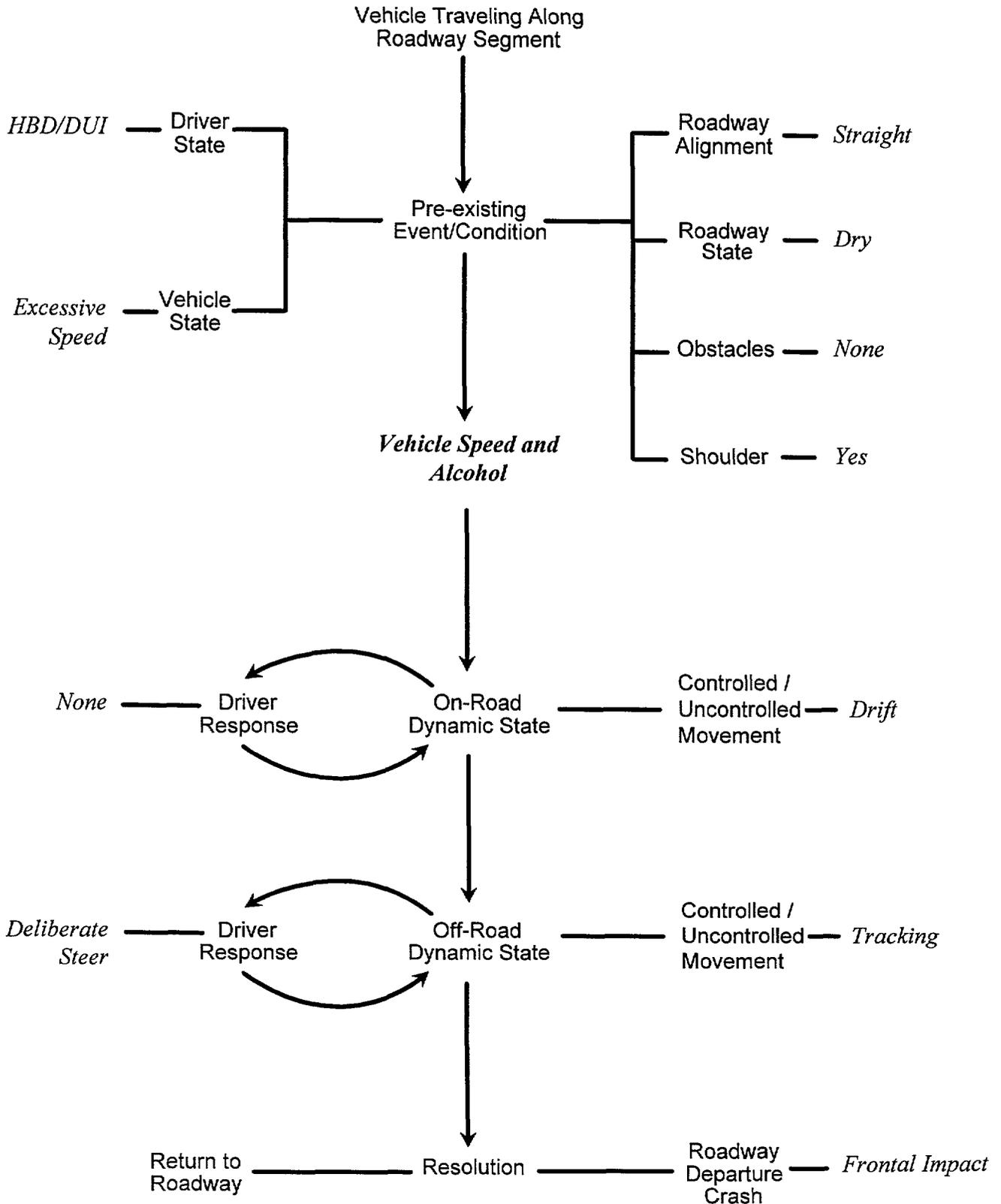
Indicate North



191

Scale: 1/500

Vehicle Dynamic Scenario



CAUSAL FACTOR.= *Driver Relinquishes Steering Control - Intoxicated*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	7-5-93	Weather	Rain
Time:	1550	Surface Condition:	Wet
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3(A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	62	Year:	1989
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Baretta/Corsica
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
G V64:	0 1	Going straight	
GV65:	12	This vehicle traveling off the edge of the road on the left side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*

ROADSIDE DEPARTURE: *Left*

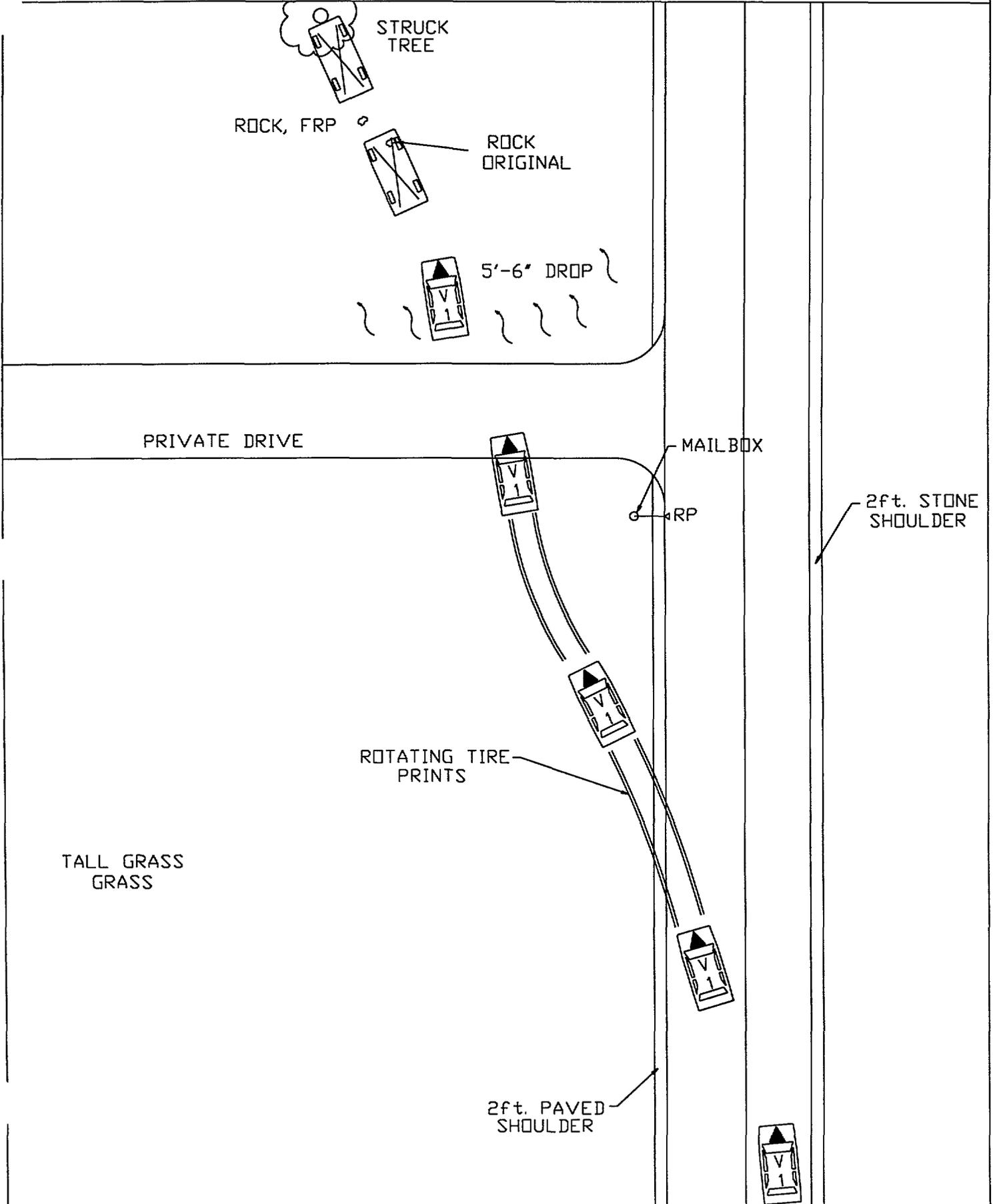
The subject vehicle was traveling in a southerly direction on a rural two-lane roadway during daylight hours. The road was straight and level but the surface was wet due to rain. The vehicle drifted off the left road edge, traversed a tall grassy area, and traveled up a shallow embankment at the side of a private driveway. The vehicle vaulted the driveway and overturned onto a large rock before coming to rest against a tree. The roadway had white edge lines and a broken yellow center line. The driver was highly intoxicated (BAC=0.33) and allowed the vehicle to gradually depart the left road edge.

ACCIDENT COLLISION DIAGRAM

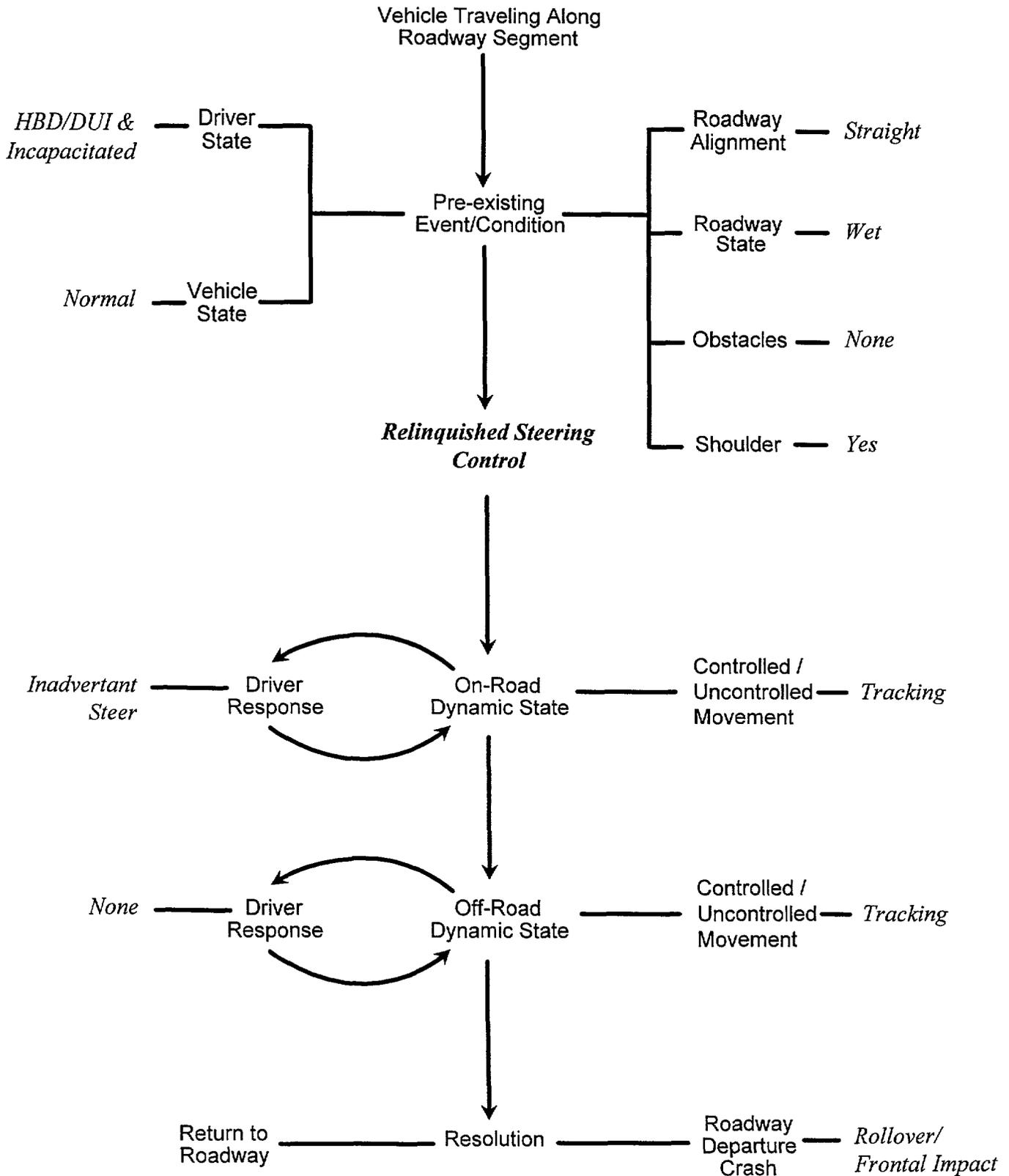
PSU No. 11

Case Number - Stratum 117J

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-7-93	Weather:	Clear/Cloudy
Time:	0017	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	20	Year:	1988
Driver Sex:	Male	Vehicle Make:	Toyota
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Pickup
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	13	Negotiating a curve	
GV65:	06	This vehicle loss of control due to traveling too fast for conditions	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*
ROADSIDE DEPARTURE: *Right*

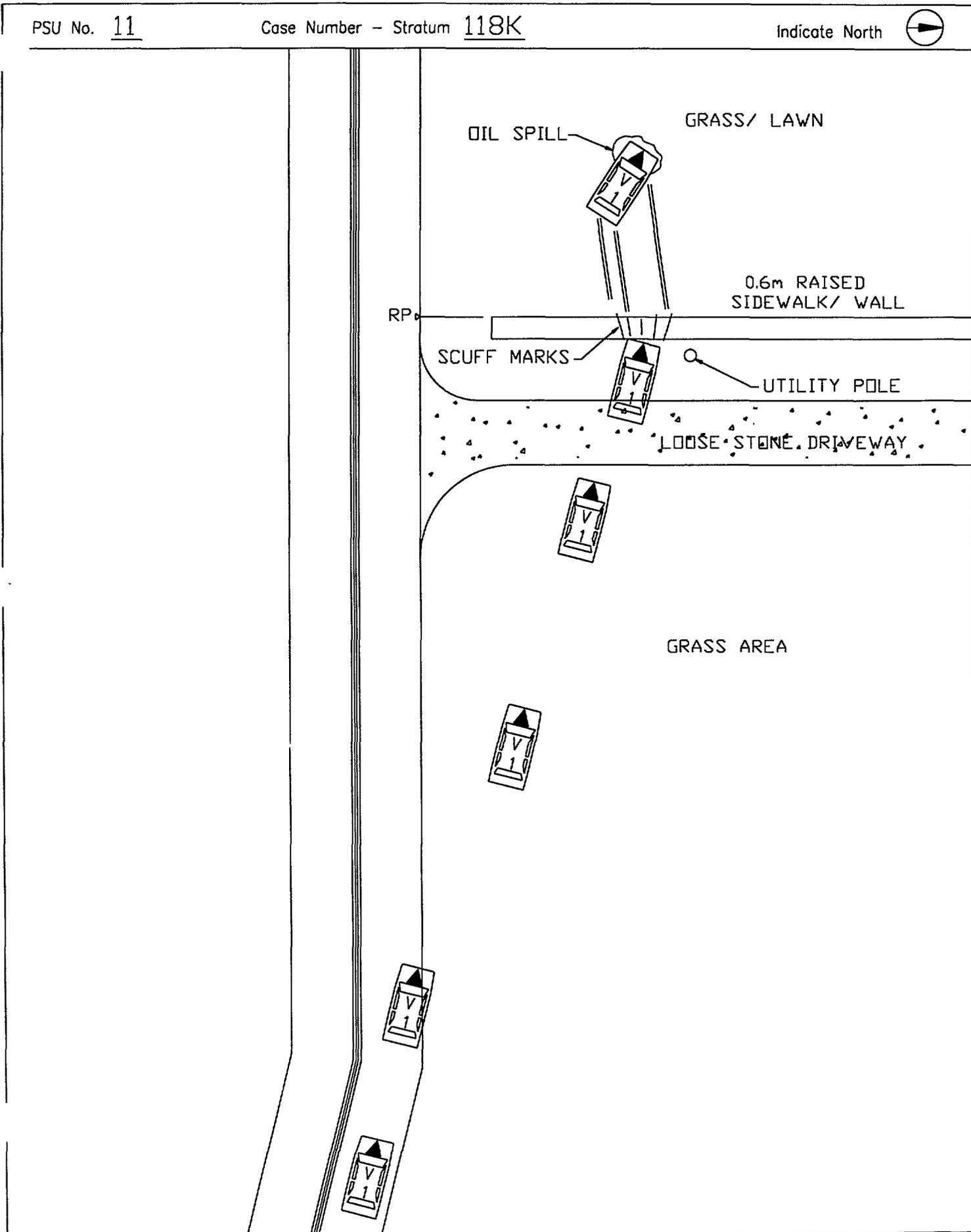
The subject vehicle was traveling west on a dry, dark and unlit, two-lane, undivided, asphalt roadway with a +3% slope. The roadway segment curved to the left. The subject vehicle departed the right roadway edge, traveled across a grassy lawn, crossed a private gravel driveway, struck a 0.6 m high raised sidewalk/wall, and came to rest on the lawn beyond the sidewalk. The roadway was delineated by full barrier yellow center lines which were in good condition and a white roadway edge line along the departure side which was extremely worn and rated in poor condition. There were no off-road obstacles with the exception of the raised sidewalk to impede vehicle recovery. The driver was intoxicated with a 0.22 BAC and traveling at 113 km/h (70 mph). The causal factor was excessive vehicle speed and alcohol consumption.

ACCIDENT COLLISION DIAGRAM

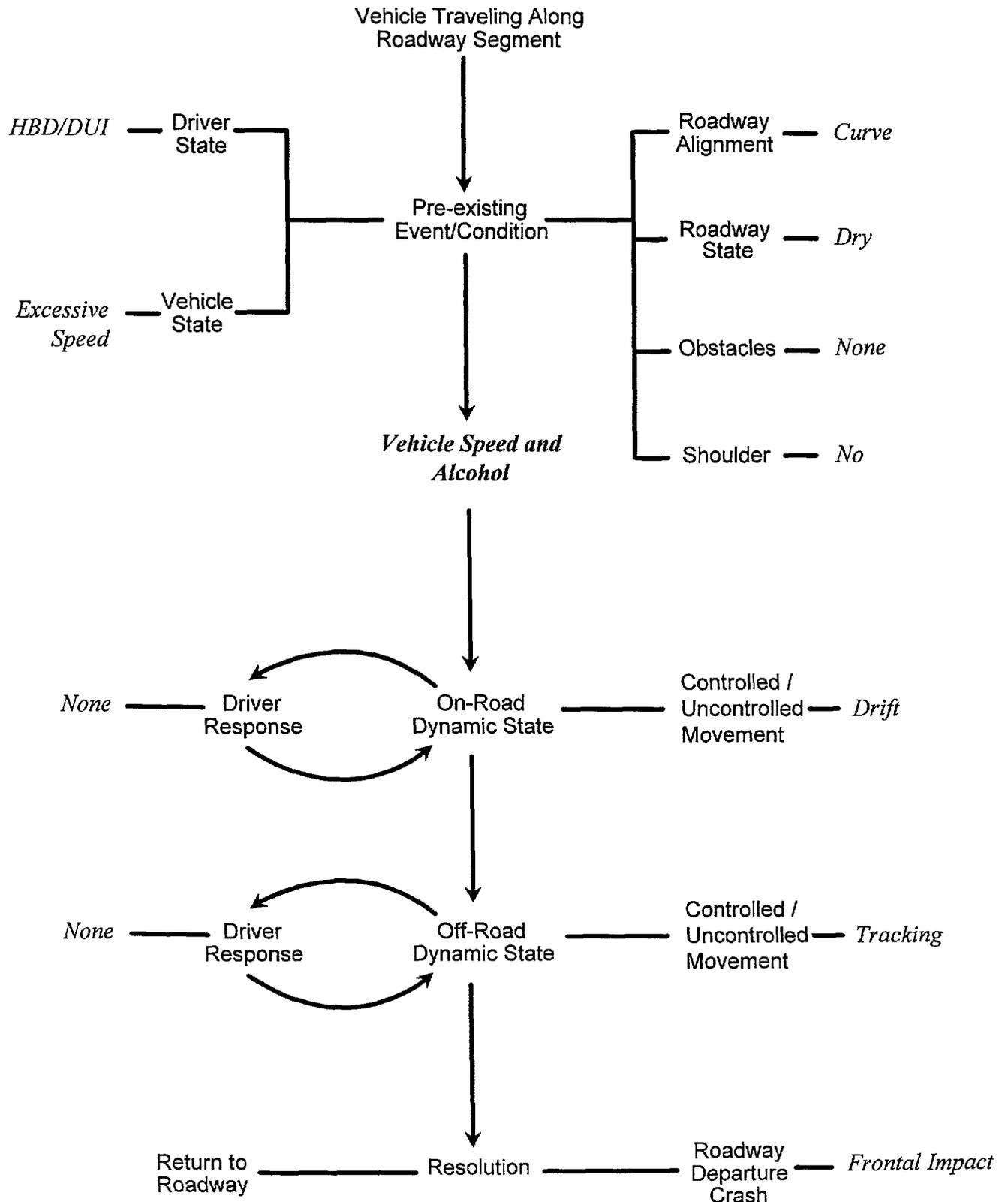
PSU No. 11

Case Number - Stratum 118K

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	7-4-93	Weather	Clear/Cloudy
Time:	1335	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	4 (K)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	22	Year:	1987
Driver Sex:	Male	Vehicle Make:	Mercury
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Topaz
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	13 Negotiating a curve		
GV65:	52 Other motor vehicle in lane traveling in same direction with higher speed		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Left*

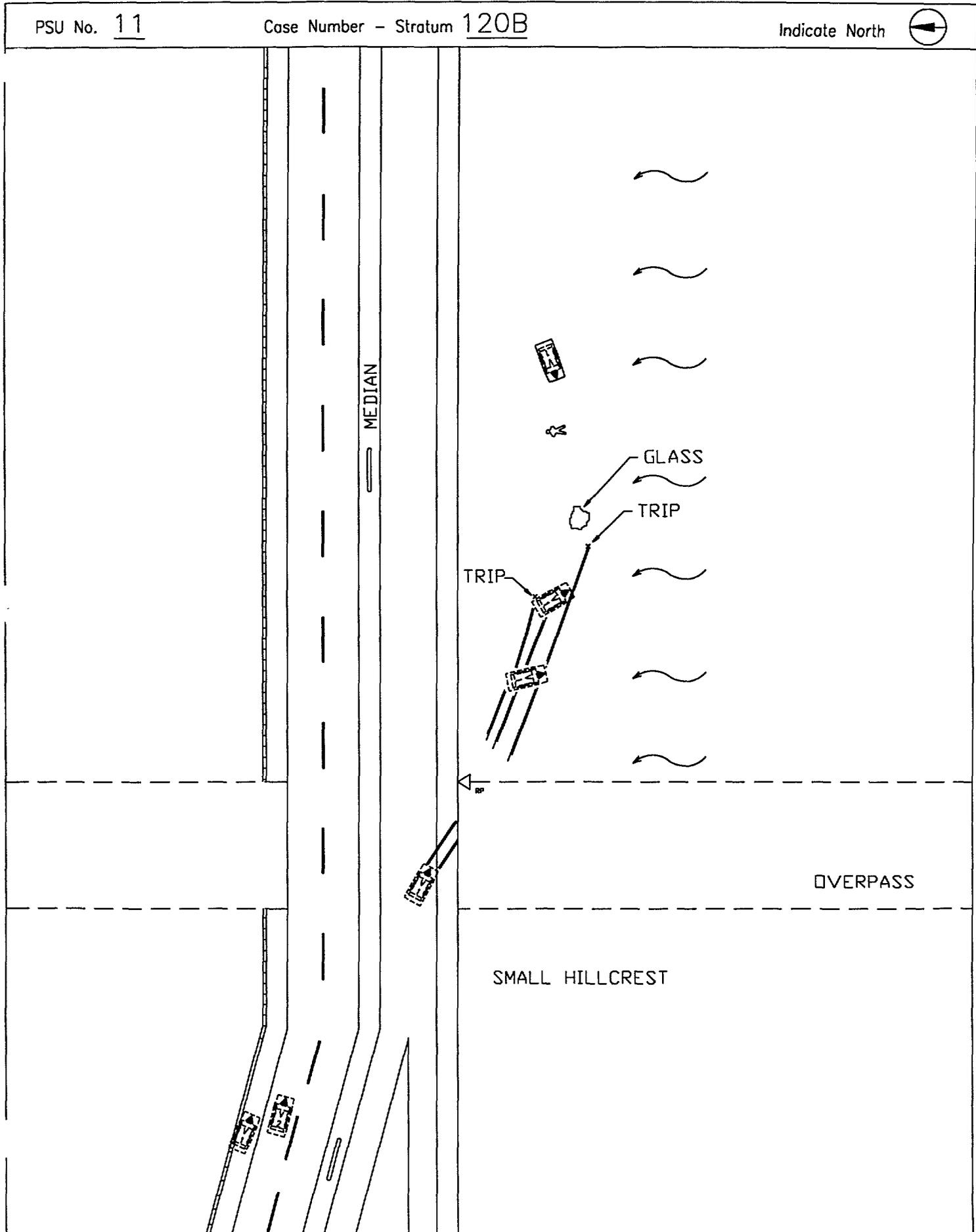
The subject vehicle was traveling eastbound in the left lane of a dry, level, four-lane, divided, asphalt interstate highway during daylight hours. As the driver approached a two-lane entrance ramp junction, the driver became engaged in a confrontation with another motorist traveling in the right lane. The subject driver crossed the left roadway edge line and traveled on the 1 m wide paved median shoulder before veering to the right in an attempt to avoid the concrete median barrier. The vehicle re-entered the eastbound travel lanes, rotated in a clockwise direction across three lanes, departed the right roadway edge, crossed the adjacent paved median/gore area, crossed the two entrance ramp lanes, departed the right side of the adjacent grass area and subsequently rolled over.

ACCIDENT COLLISION DIAGRAM

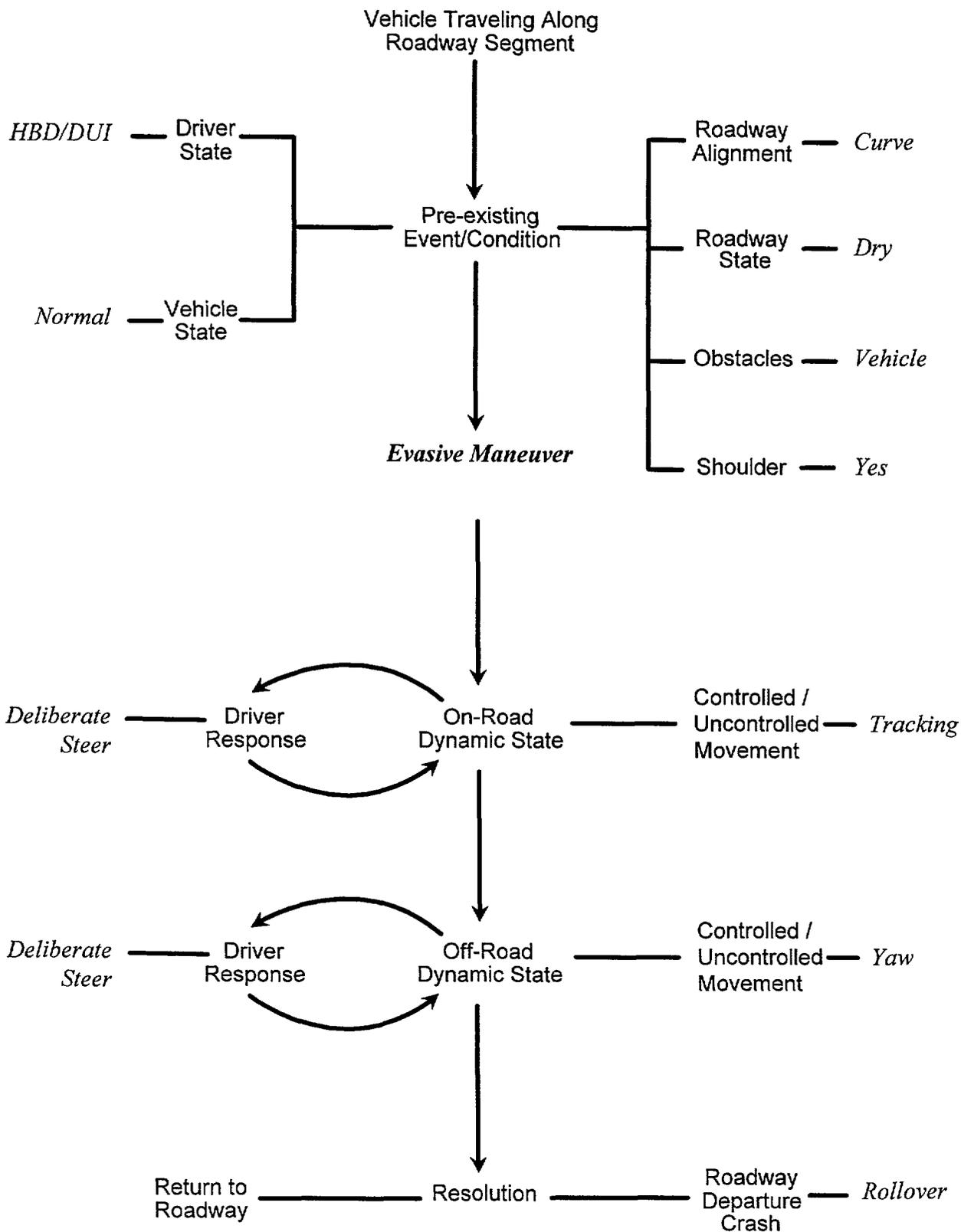
PSU No. 11

Case Number - Stratum 120B

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Other
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-7-93	Weather:	Clear/Cloudy
Time:	2226	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Artificial lighting
Accident Severity:	3 (A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	42	Year:	1993
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Baretta/Corsica
Familiarity with Road:	Unknown	ABS:	Yes
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	5	Slope:	Grade
		Speed Limit:	64 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Other*
ROADSIDE DEPARTURE: *Right*

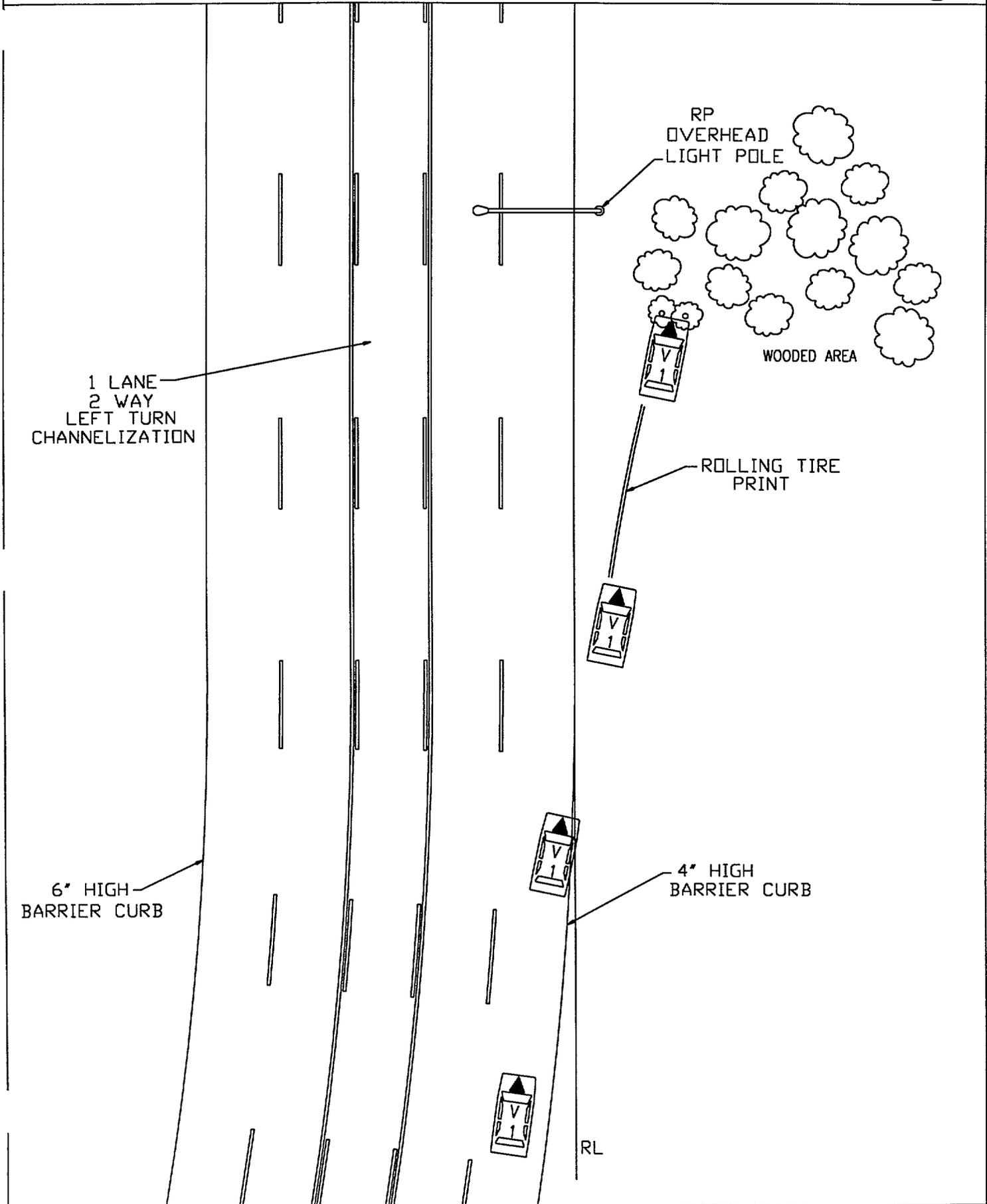
The subject vehicle was traveling eastbound on a dry, five-lane, asphalt roadway which curved to the left with a -2% slope. The vehicle departed the right side of the roadway, mounted a 10 cm high barrier curb, crossed a grassy area and struck two trees with the left side and frontal planes. The driver had consumed alcohol and illicit drugs prior to the accident, and had apparently fallen asleep and drifted off the roadway. The roadway was dark with illumination provided by overhead street lights. The roadway edge was noted only by a barrier curb without a supplemental painted road edge line. The two eastbound lanes were defined by broken white lane lines. The center of the roadway was marked with solid yellow and broken lines to define the boundaries of a two way, left turn channelization lane. The causal factor for the accident was driver relinquished steering control after falling asleep. Contributing factors were the consumption of alcohol and other illicit drugs.

ACCIDENT COLLISION DIAGRAM

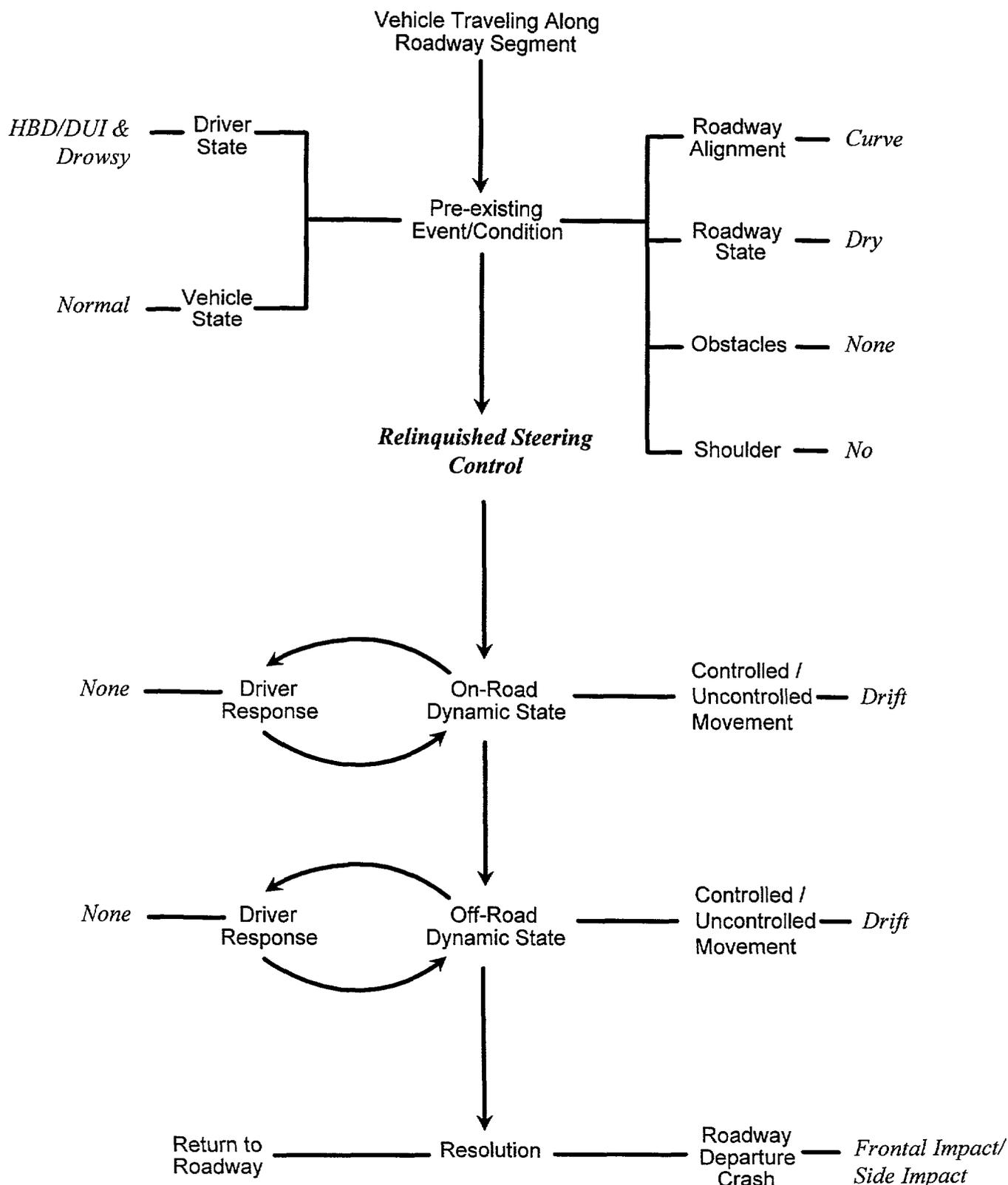
PSU No. 11

Case Number - Stratum 121J

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Inattention*
ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	0920	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	33	Year:	1988
Driver Sex:	Female	Vehicle Make:	Mazda
Impairment:	None	Vehicle Model:	MX-6
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	2	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	02	Slowing or stopping in traffic lane	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Inattention*
ROADSIDE DEPARTURE: *Right*

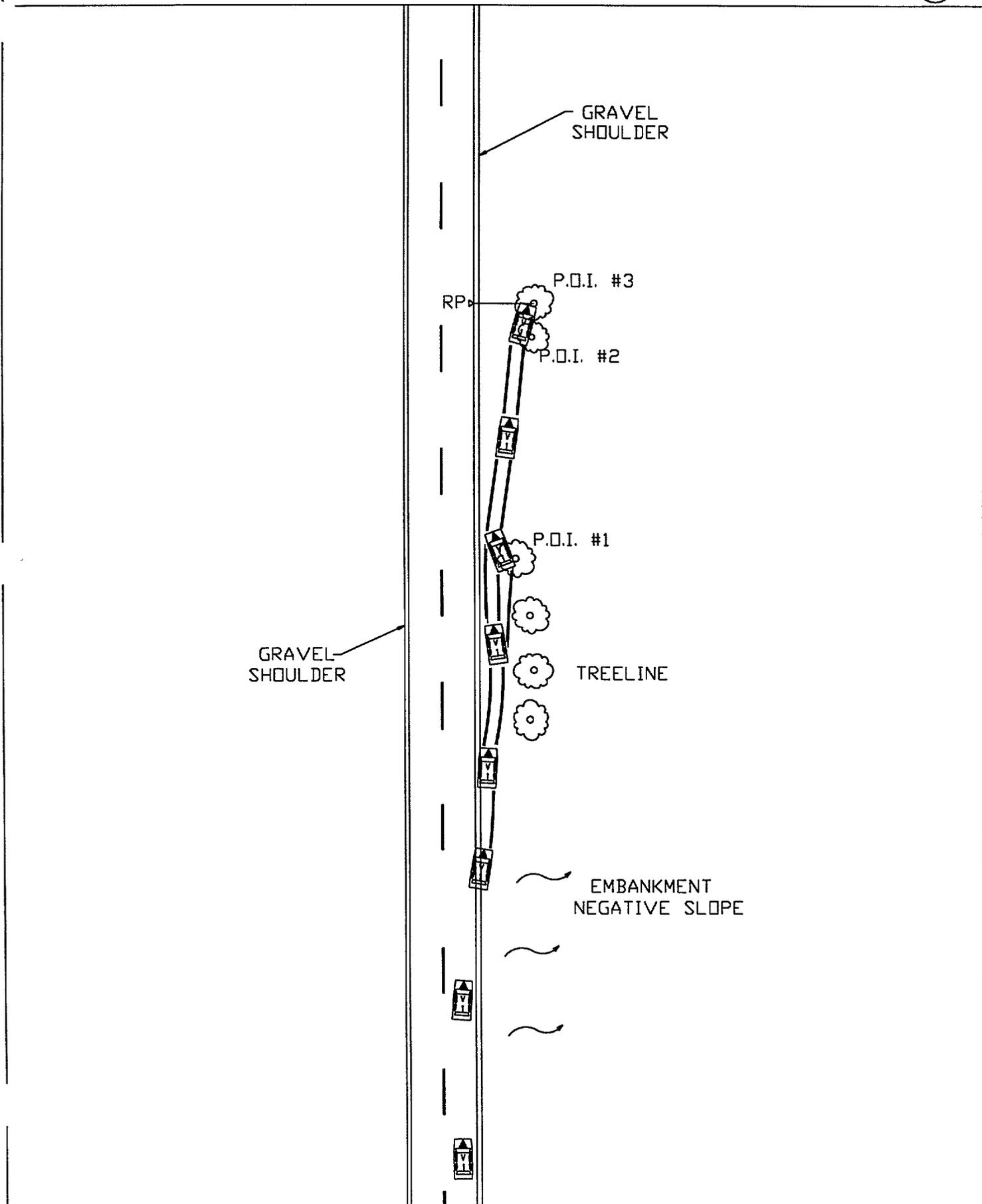
This subject vehicle was traveling east on a dry, rural, two-lane, undivided, asphalt roadway with a -2% slope. The vehicle drifted off the right side of the roadway, crossed the 0.3 m gravel shoulder, traveled along a negative-sloped grass embankment, sideswiped a tree with its right side, and struck another tree with its frontal plane. The driver was distracted when a pet dog sitting in the right front seat became ill and the driver reached in the rear seat for paper towels. The roadway was marked with a new broken/solid yellow center line (i.e., passing allowed for eastbound traffic), however, there were no road edge lines on either side of the roadway. The roadway boundary included a 0.3 m gravel shoulder followed by a negative-sloped embankment and a tree line barrier located 3.4 m laterally from the roadway edge. The causal factor was driver inattentive to the driving task (steered off roadway while retrieving an object from the rear seat).

ACCIDENT COLLISION DIAGRAM

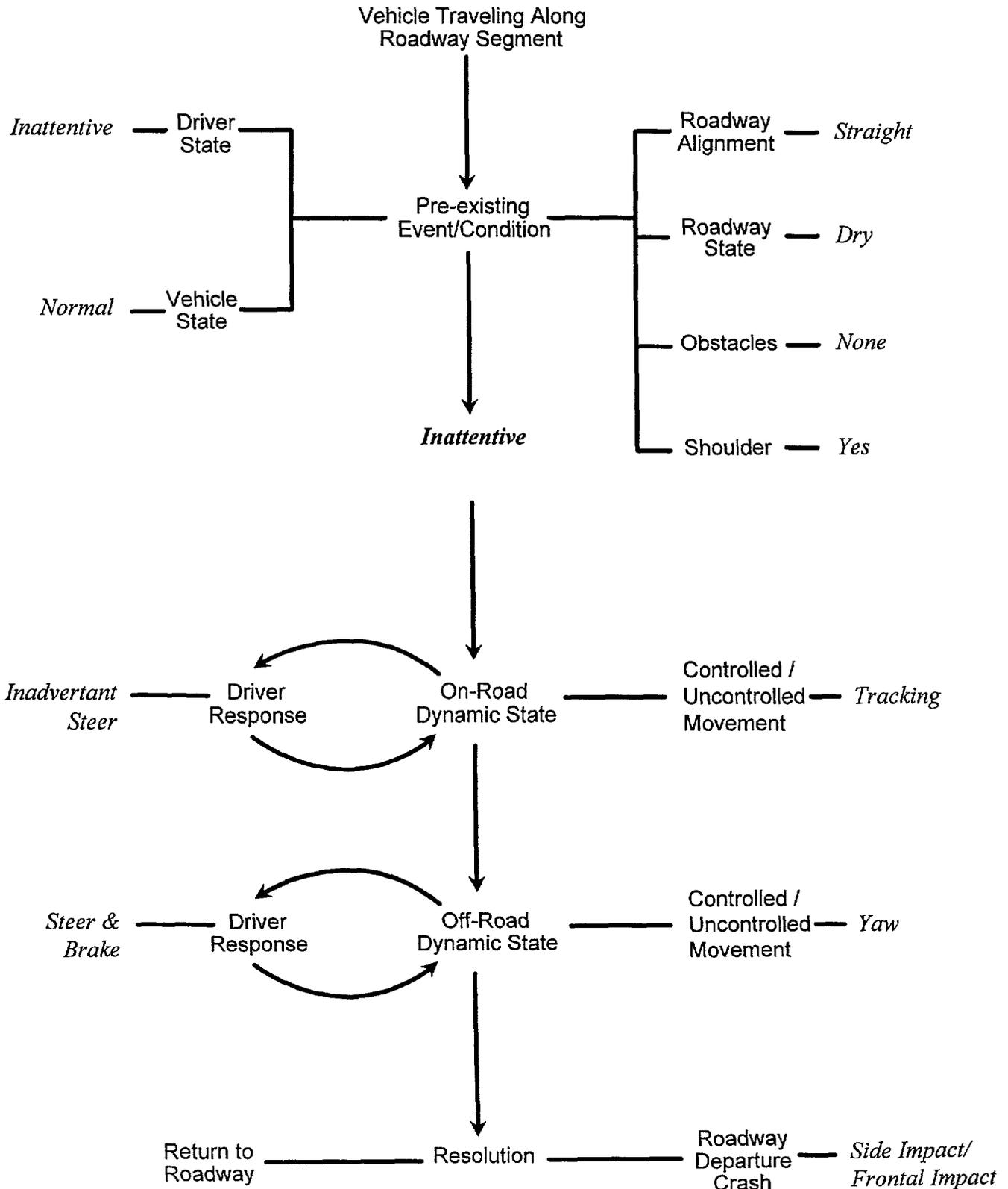
PSU No. 11

Case Number - Stratum 125K

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Avoid Animal or Pedestrian*

ROADSIDE DEPARTURE: *Left*

General Accident Information			
Date:	7-4-93	Weather	Clear/Cloudy
Time:	0252	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	38	Year:	1992
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	C, K, R, V-series
Familiarity with Road:	Unknown	ABS:	Yes
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	01 Going straight		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Avoid Animal or Pedestrian*
ROADSIDE DEPARTURE: *Left*

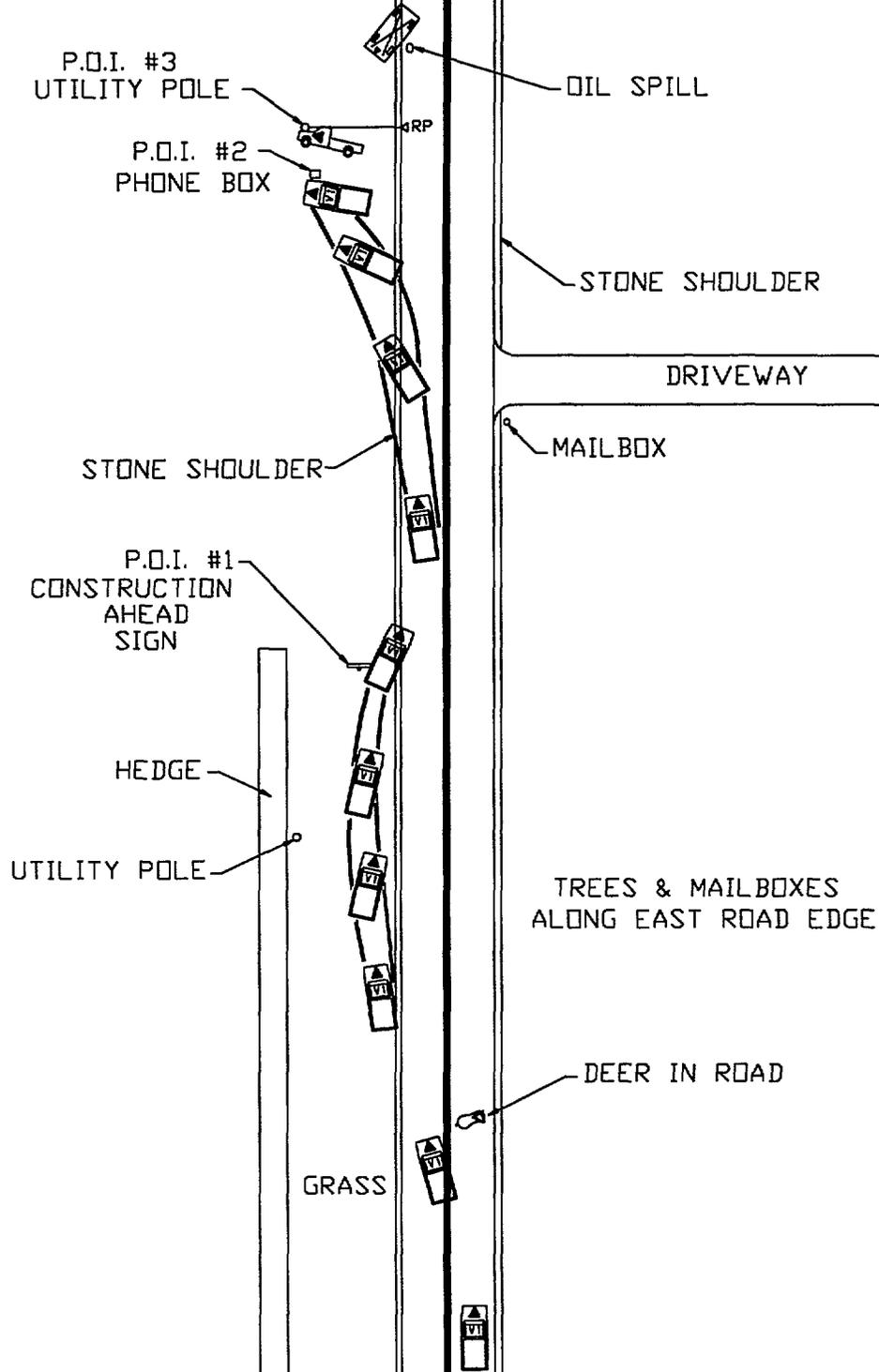
The subject vehicle was traveling in a northerly direction on a two-lane roadway in a 72 km/h (45 mph) speed zone. The driver swerved to the left to avoid a deer that was entering the roadway, and the vehicle departed the left road edge. The driver subsequently swerved back to the right to avoid a utility pole and a construction sign. As the vehicle re-entered the road, the driver again swerved to the left which induced a counterclockwise yaw. The driver braked and braced against the steering wheel as the vehicle yawed off the left road edge. As the vehicle rotated to a near broadside orientation, it pitched to the right and overturned onto its right side. The hood area impacted a utility pole and a utility box. The vehicle rotated counterclockwise off the struck pole and overturned onto the roof where it came to rest. The primary causal factor involved evasive action by the driver to avoid a deer in the road. The driver had a BAC of 0.17 and intoxication was a secondary causal factor.

ACCIDENT COLLISION DIAGRAM

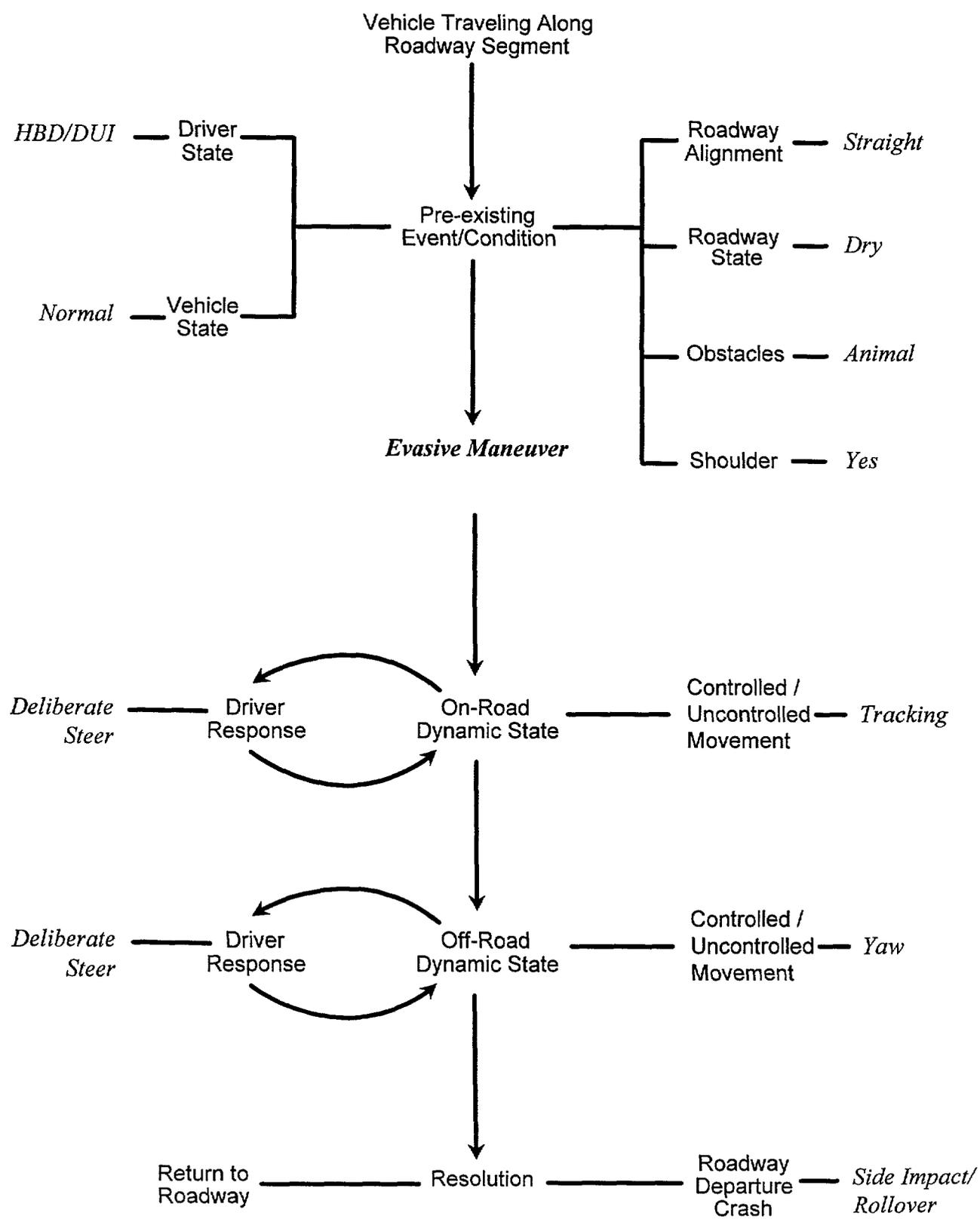
PSU No. 11

Case Number - Stratum 126E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Unsafe Driving Act

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	0415	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	4 (K)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	21	Year:	1993
Driver Sex:	Male	Vehicle Make:	Ford
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	Mustang/ Mustang II
Familiarity with Road:	Yes	ABS:	Unknown
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Left
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	13 Negotiating a curve		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	4 Skidding laterally - counterclockwise rotation		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: Vehicle Speed - Unsafe Driving Act

ROADSIDE DEPARTURE: Right

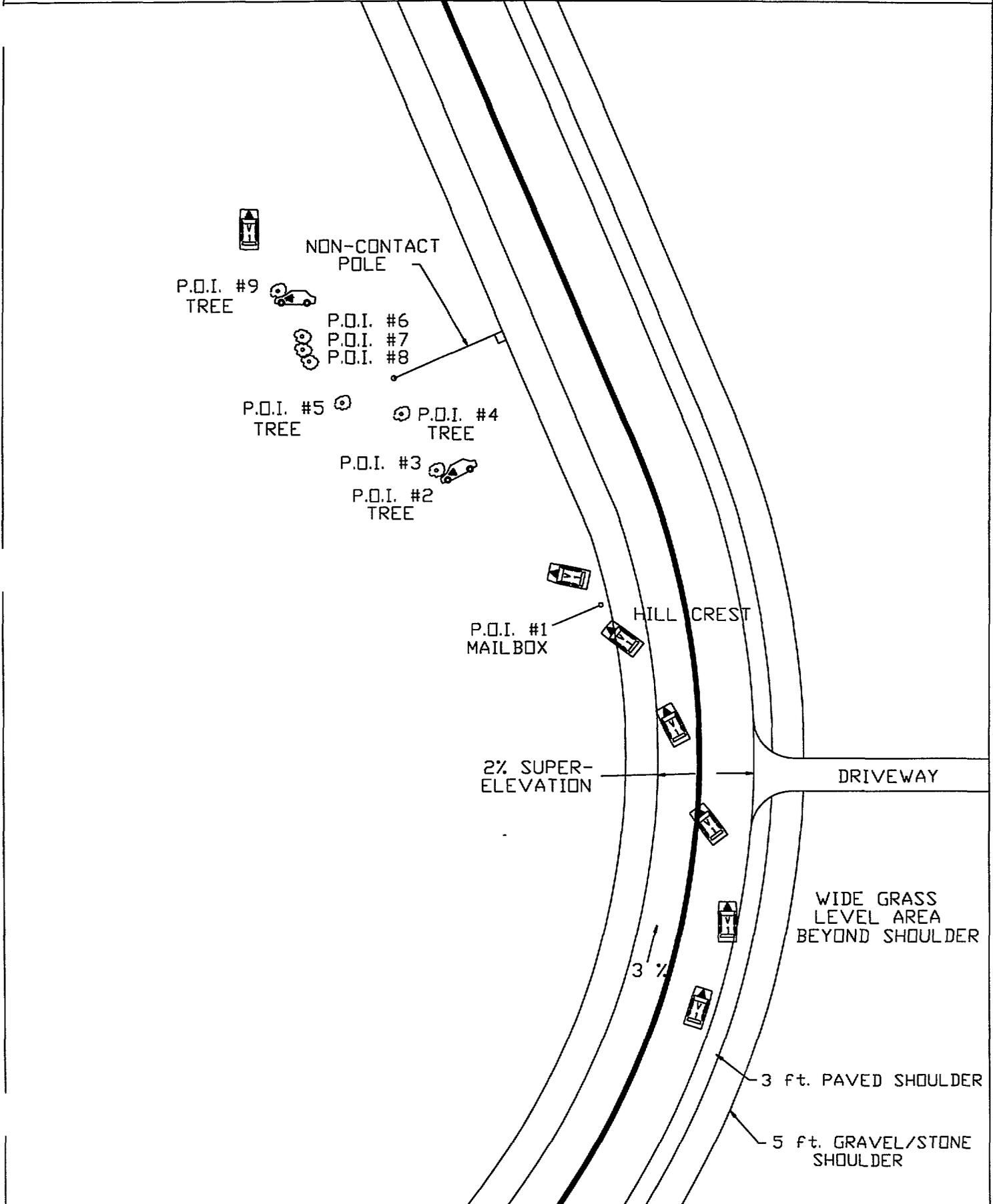
The subject vehicle was traveling in an easterly direction on a rural two-lane roadway that curved to the left and had a positive slope. As the driver attempted to negotiate the left curve, the vehicle drifted off the right road edge onto the paved and gravel shoulder. The driver applied a rapid counterclockwise steering input in an attempt to steer the vehicle back onto the travel lane. The vehicle broke traction and yawed approximately 90 degrees counterclockwise across the roadway and departed the left shoulder. The right rear area of the vehicle impacted a mail box post. The vehicle subsequently pitched to the right and became airborne, traveling approximately 55 m in the air. The vehicle impacted several trees before coming to rest in heavy brush in a ditch, approximately 21 m off-road. Both road edge lines and the center lines were in poor condition. There were no reflective markers/delineators along the dark asphalt roadway. The driver was traveling at a high rate of speed, in excess of 161 km/h (100 mph), and was under the influence of alcohol (BAC=0.10) and marijuana. The driver was operating the vehicle in a reckless manner (unsafe driving act) while intoxicated.

ACCIDENT COLLISION DIAGRAM

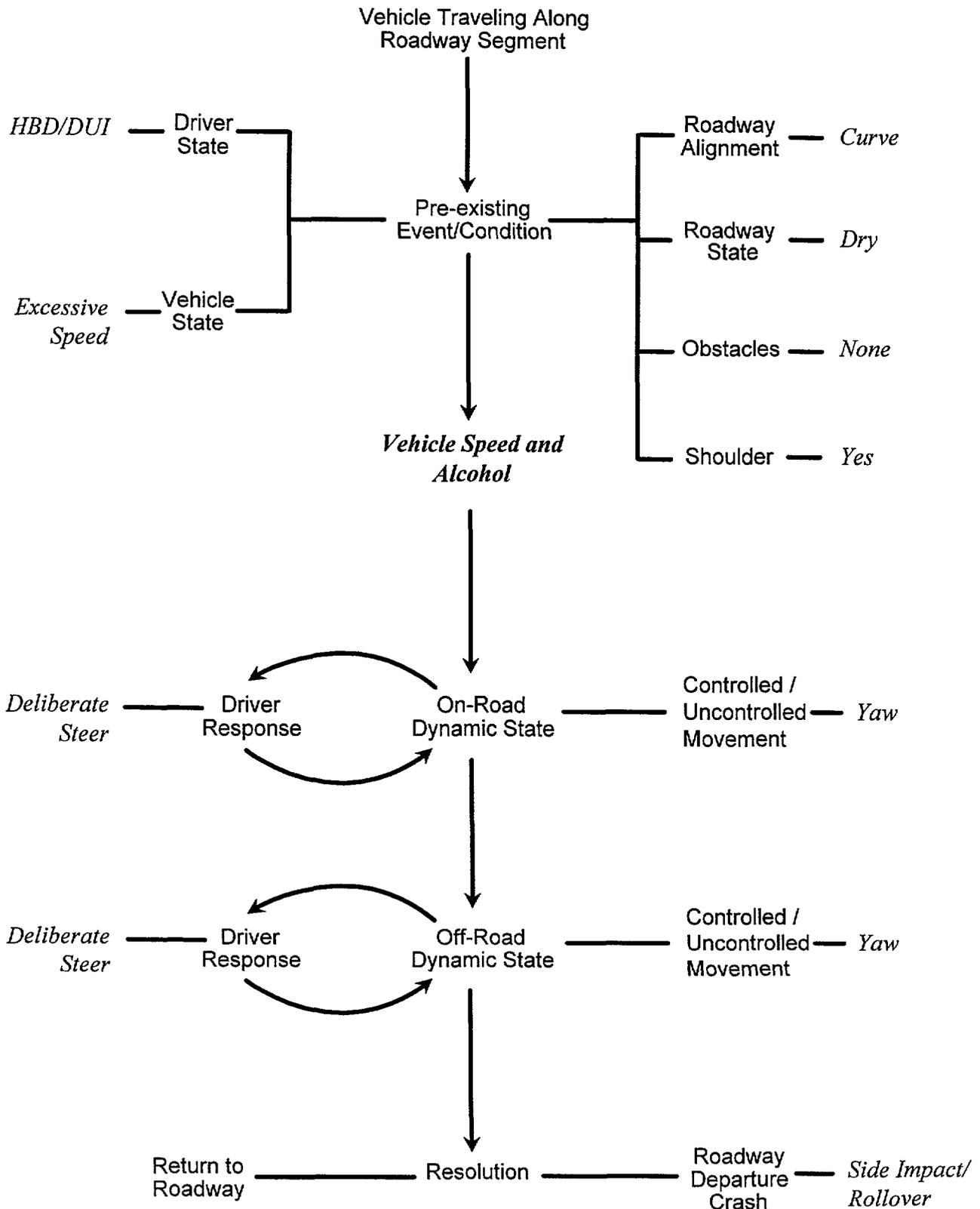
PSU No. 11

Case Number - Stratum 132A

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Inattention

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	7-3-93	Weather:	Clear/Cloudy
Time:	1510	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	38	Year:	1988
Driver Sex:	Female	Vehicle Make:	Dodge
Impairment:	None	Vehicle Model:	Caravan
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	5	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	64 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

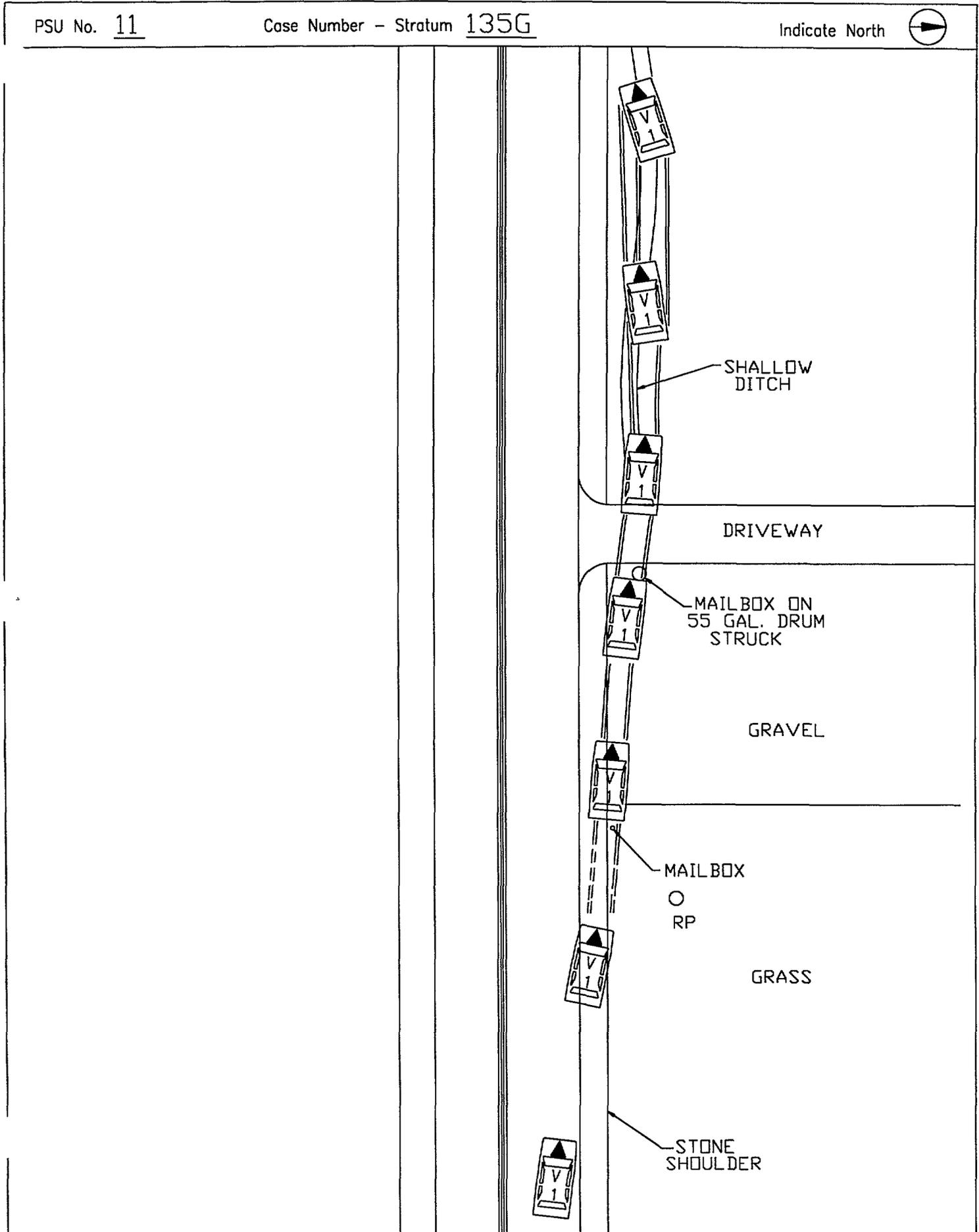
The subject vehicle was westbound on a two-lane roadway during clear, daylight hours. The driver turned around to check on a crying child passenger and inadvertently steered off the right road edge. The right front corner area of the vehicle impacted a mailbox as the driver braked and steered in a counterclockwise direction. The vehicle traversed a driveway and a lawn area as it yawed slightly in a counterclockwise direction. The right side of the vehicle sideswiped a utility pole as it straddled a shallow ditch. The driver regained control of the vehicle and redirected it back onto the roadway. The outboard edges of the road were in poor (worn) condition, without edge lines. Gravel shoulders were bordered by lawn. The causal factor was inattention to the driving task.

ACCIDENT COLLISION DIAGRAM

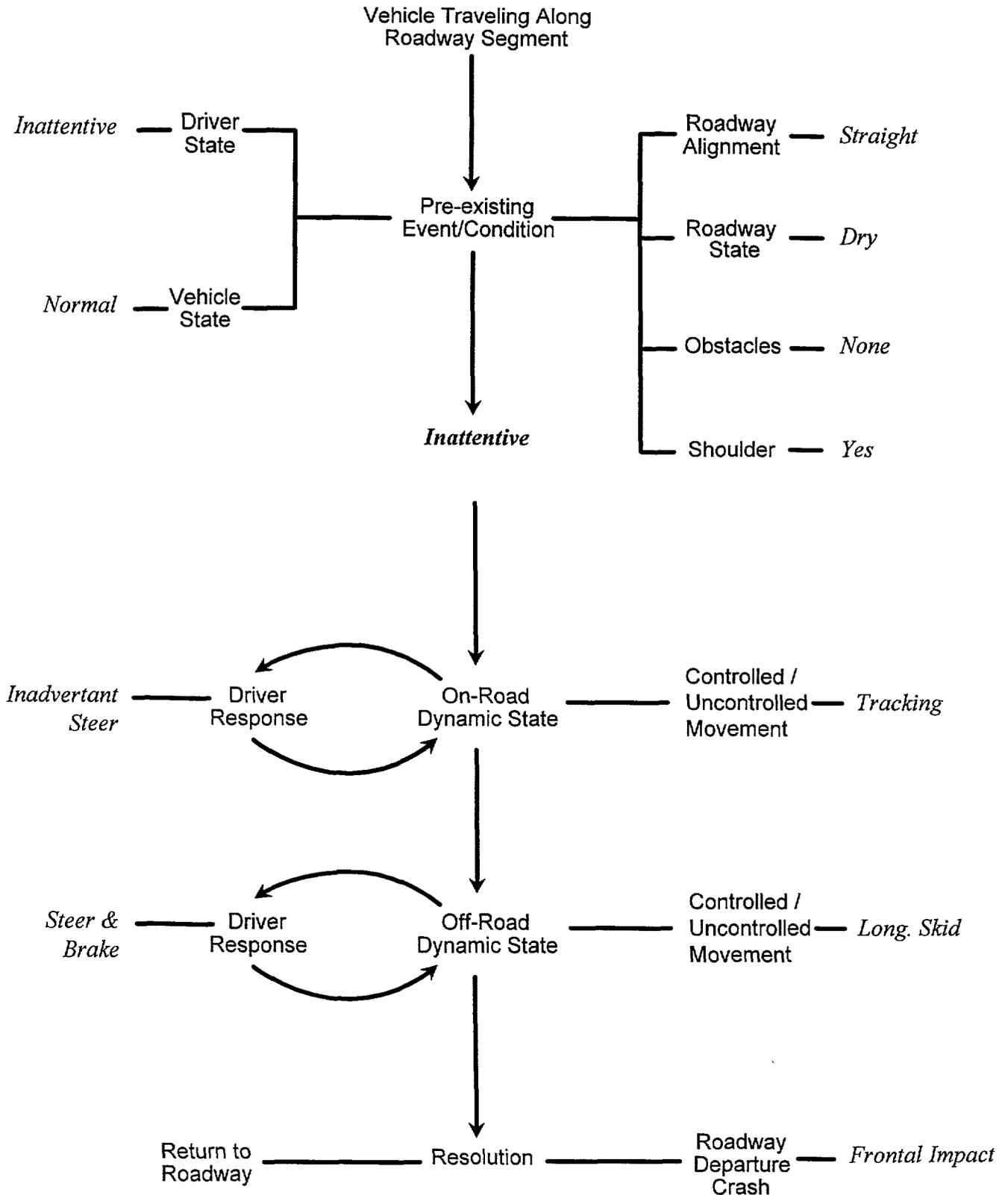
PSU No. 11

Case Number - Stratum 135G

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Evasive Maneuver - Vehicle Encroaching into Lane -
Other

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	7-3-93	Weather	Clear/Cloudy
Time:	0740	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	25	Year:	1993
Driver Sex:	Female	Vehicle Make:	Ford
Impairment:	None	Vehicle Model:	Escort/EXP
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	13 Negotiating a curve		
GV65:	08 This vehicle loss of control due to other		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Other*

ROADSIDE DEPARTURE: *Left*

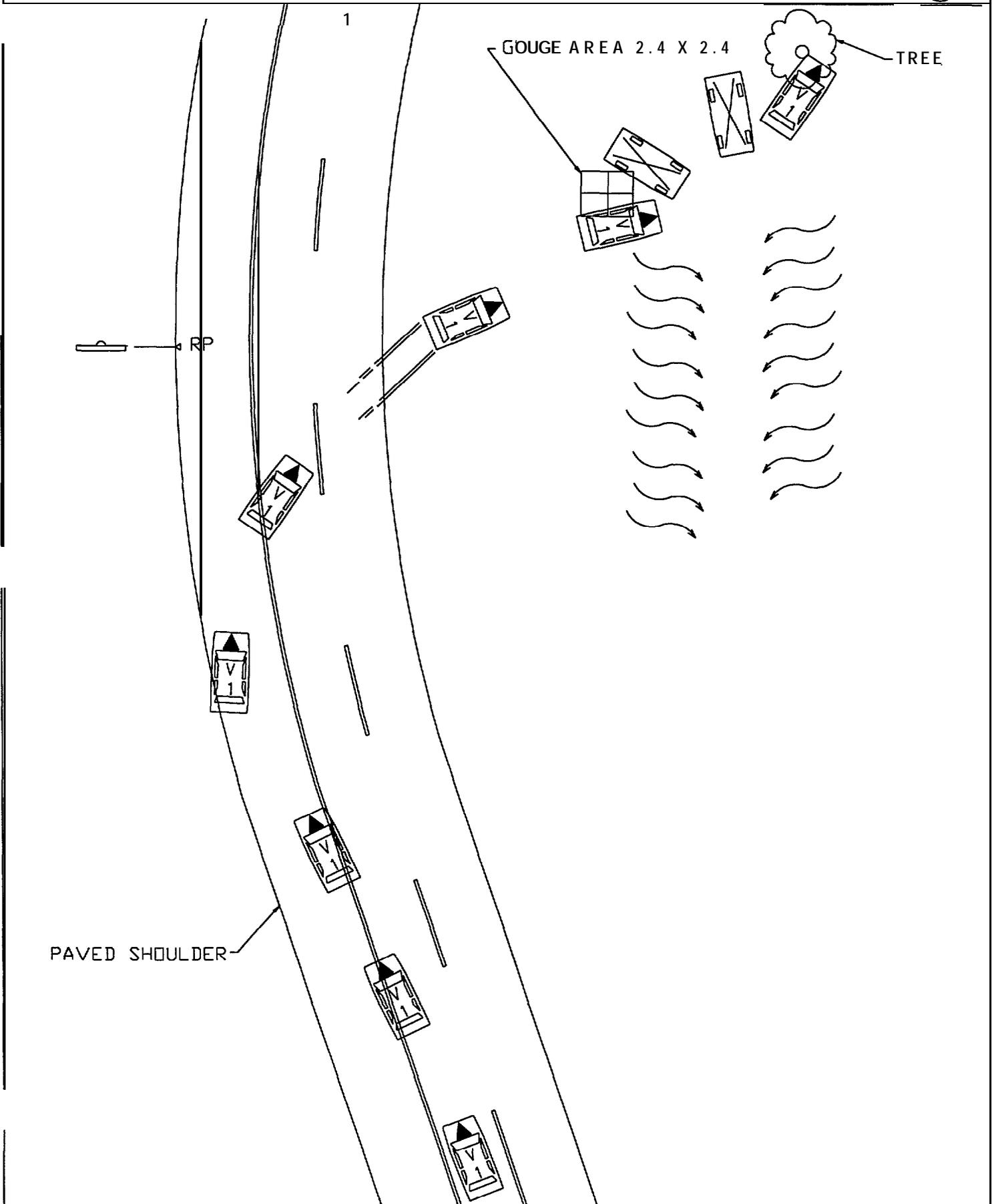
The subject vehicle was proceeding in a westerly direction on a dry, two-lane, asphalt bypass that curved to the right. This road was physically divided from the opposing traffic lanes by a wide grass median. The vehicle was traveling in the passing lane at a driver estimated speed of 97- 113 km/h (60-70 mph). A vehicle (truck) traveling ahead of the subject vehicle kicked up a stone which struck and cracked the windshield of the subject vehicle. As a reflexive action, the subject driver steered to the left and exited the left edge of the roadway. As the vehicle crossed a wide paved shoulder and entered the grass median, the driver overcorrected back to the right. The vehicle reentered the roadway yawing in a clockwise direction, and crossed the roadway in a broadside skid to the left. The vehicle exited the right edge of the roadway, traveled approximately 4.6 m down a negative-sloped embankment, rolled to the left and came down on its top. The vehicle struck a tree with its right rear quarter panel (while upside down), spun around the tree (clockwise), and came to rest on its top, facing in a northerly direction.

ACCIDENT COLLISION DIAGRAM

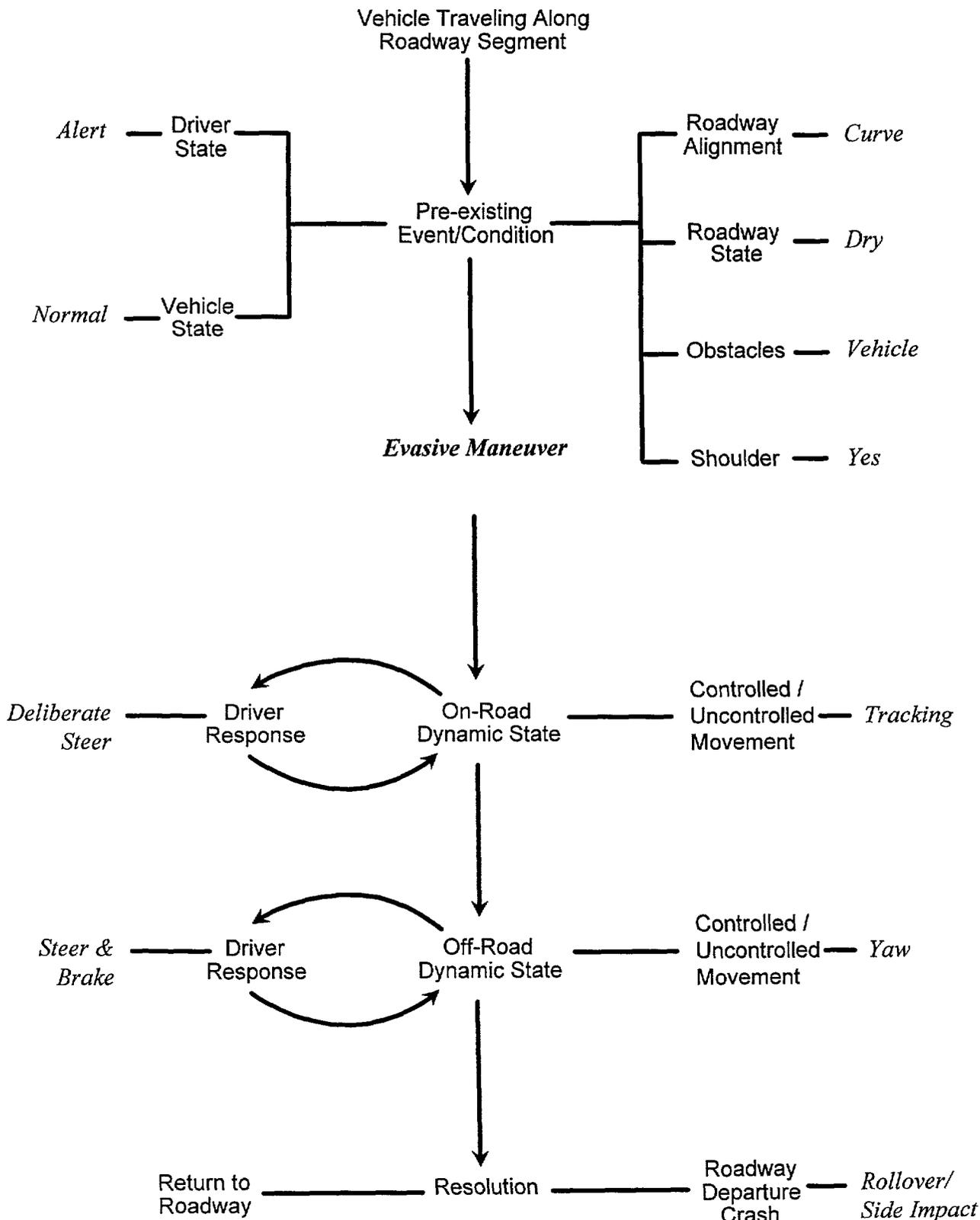
PSU No. 11

Case Number - Stratum 136C

Indicate North



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Relinquishes Steering Control - Intoxicated

ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	8-3-93	Weather:	Clear/Cloudy
Time:	0200	Surface Conditions	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	22	Year:	1988
Driver Sex:	Male	Vehicle Make:	Saab
Impairment:	Intoxicated (alcohol/drugs)	Vehicle Model:	99/99E/900
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Physical barrier	Alignment:	Curve Left
No. of Lanes:	3	Slope:	Level
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	01 No avoidance actions		
GV64:	13 Negotiating a curve		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	0 No avoidance maneuver		
GV67:	0 No avoidance maneuver		

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Intoxicated*

ROADSIDE DEPARTURE: *Left*

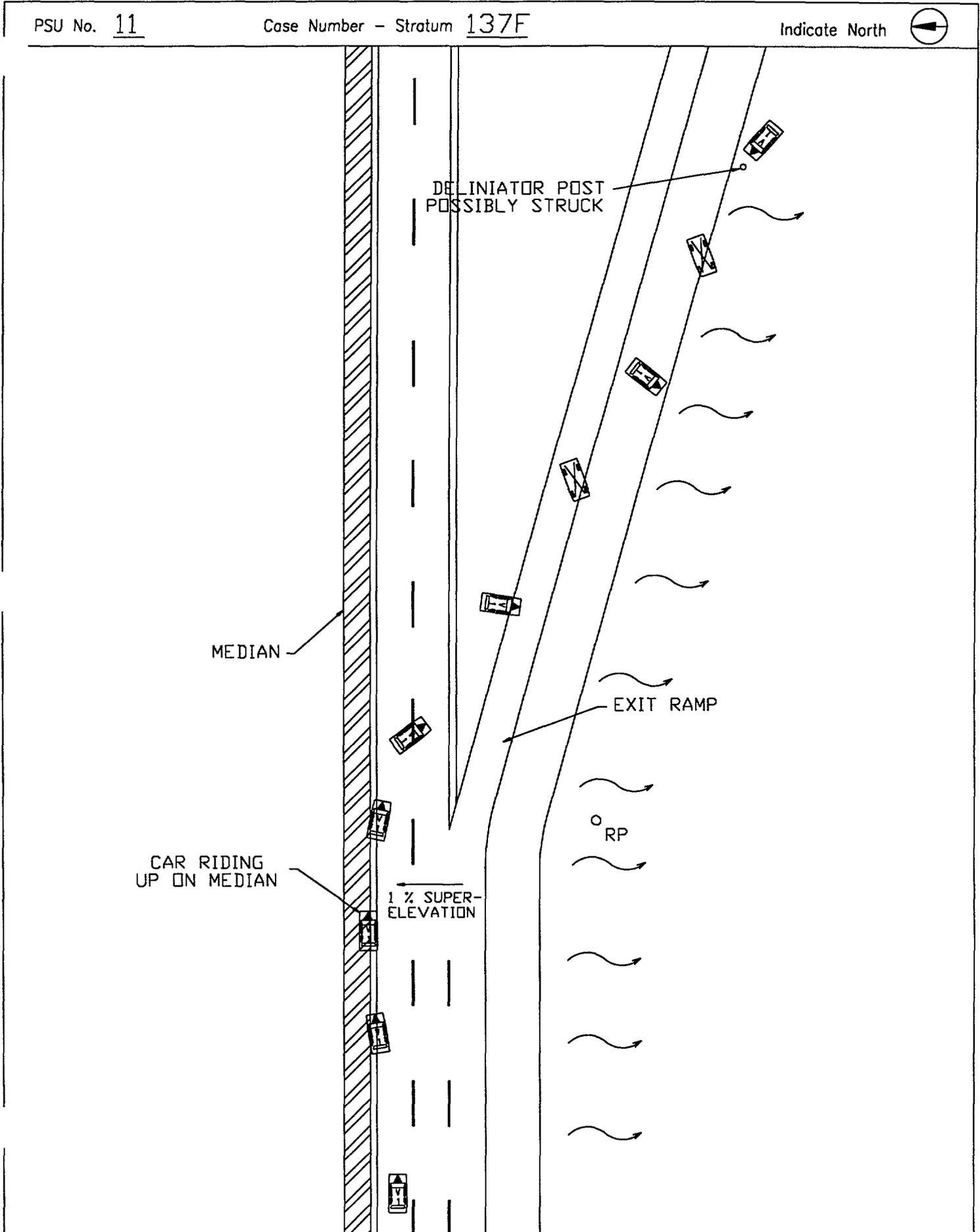
The subject vehicle was traveling in an easterly direction on the inboard of three travel lanes on a divided interstate. The asphalt road surface was dry and level and curved to the left. Paved shoulders bordered both road edges and a concrete median barrier separated the east/westbound travel lanes. As the driver attempted to negotiate the left curve, the vehicle drifted off the inboard road edge, overrode a 0.6 m wide rumble strip, and traversed the paved shoulder before impacting a concrete median barrier. The driver subsequently applied a clockwise steering input which redirected the vehicle across the travel lanes and off the right road edge where the vehicle overturned. The driver was intoxicated (BAC=0.15) and was traveling at a high rate of speed. Driver intoxication was the primary causal factor with secondary factors involving high speed and probable drowsiness.

ACCIDENT COLLISION DIAGRAM

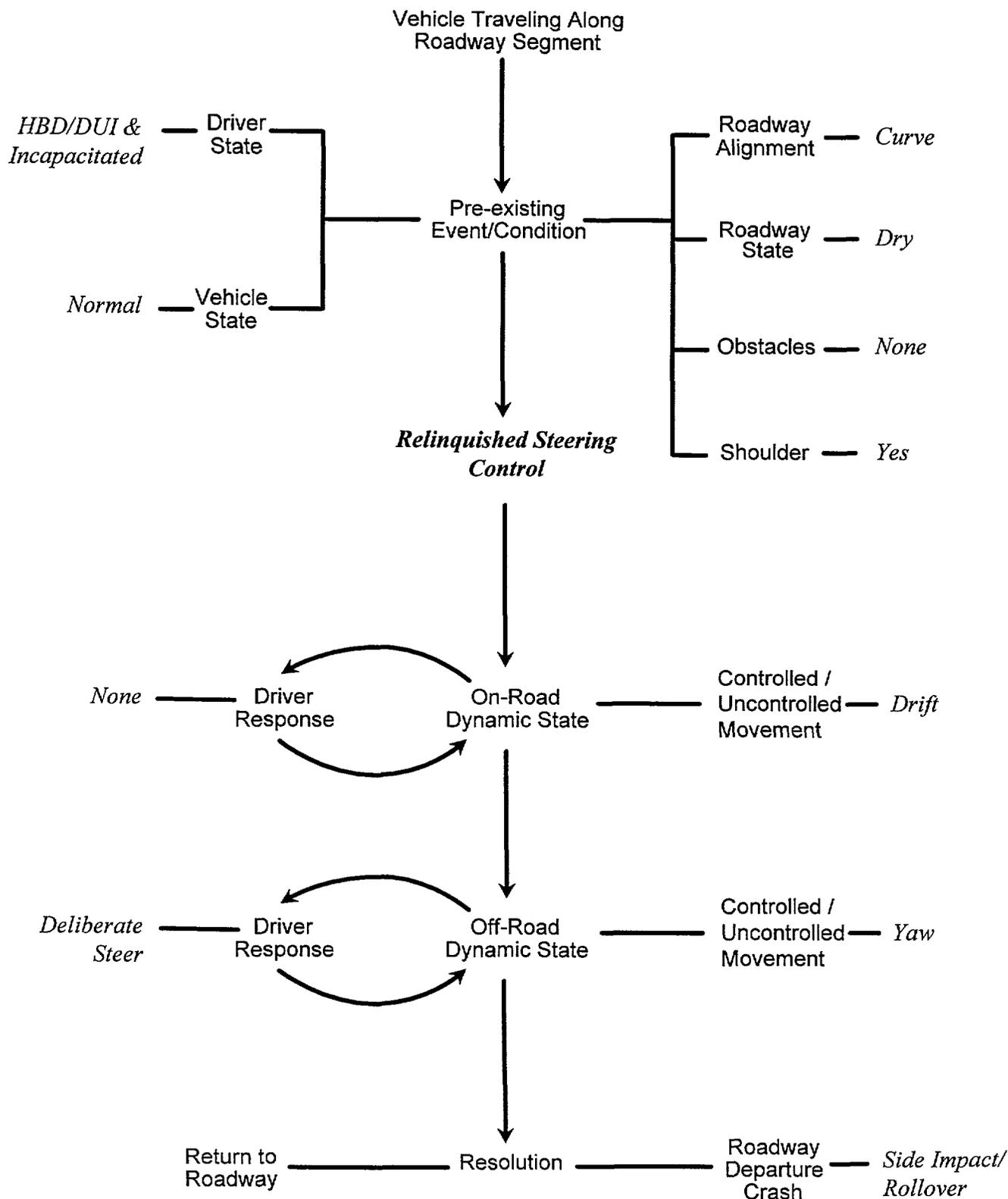
PSU No. 11

Case Number - Stratum 137F

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Other*

ROADSIDE DEPARTURE: *Right*

General Accident Information			
Date:	1-1-93	Weather:	Unknown
Time:	1120	Surface Condition:	Ice/Snow
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	1 (C)	Land Use:	Rural
Driver/Occupant information		Vehicle Information	
Driver Age:	34	Year:	1992
Driver Sex:	Female	Vehicle Make:	Saturn
Impairment:	None	Vehicle Model:	SL
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	4	Slope:	Level
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	09 Braking and steering right		
GV64:	16 Successful avoidance of previous event		
GV65:	13 This vehicle traveling off the edge of the road on the right side		
GV66:	1 Tracking		
GV67:	2 Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Other*

ROADSIDE DEPARTURE: *Right*

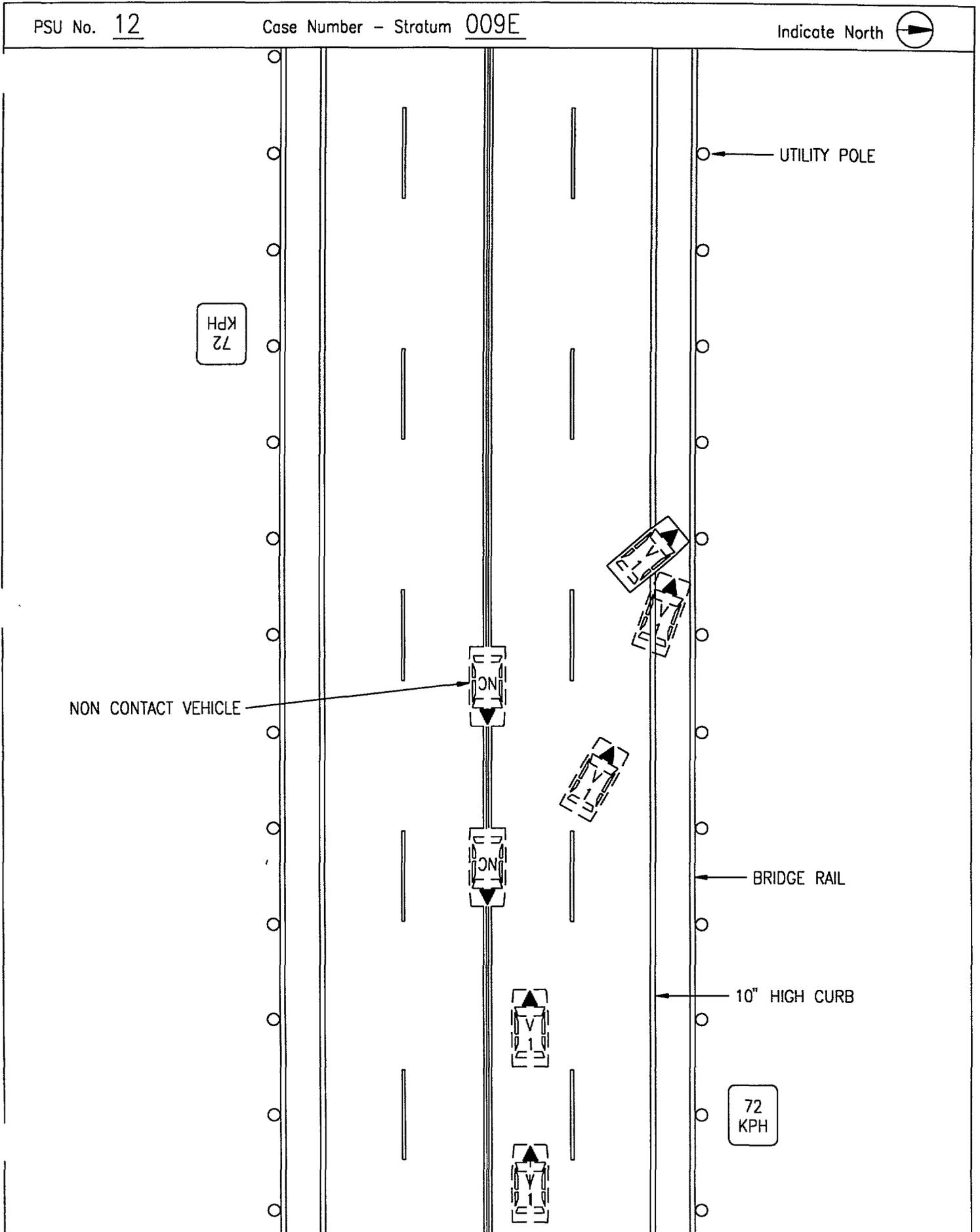
The subject vehicle was traveling west on a level, straight section of a four-lane, undivided, concrete roadway after exiting a left curved segment. The roadway was icy and the boundary was defined by a bridge rail on both sides of the road. An eastbound vehicle encroached into the subject vehicle's left travel lane and the subject driver initiated a counterclockwise steering maneuver and applied the brakes resulting in the vehicle departing the right road side. The vehicle struck a 25 cm barrier curb and subsequently struck the bridge railing located 1.8 m from the roadway edge. The causal factor was evasive maneuver with loss of vehicle control on icy surface.

ACCIDENT COLLISION DIAGRAM

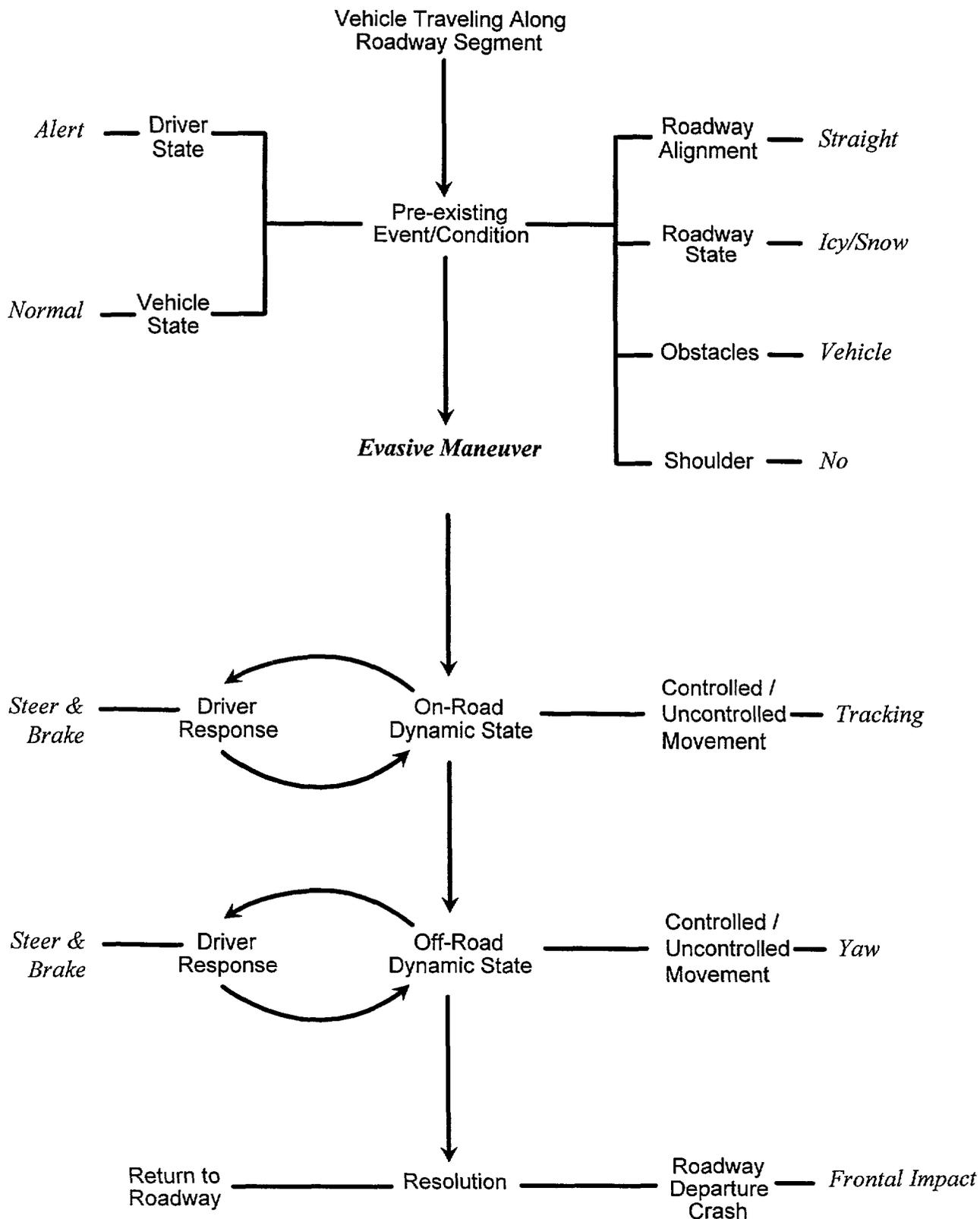
PSU No. 12

Case Number - Stratum 009E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Driver Inattention

ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	5-1-93	Weather:	Clear/Cloudy
Time:	0115	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	None
Accident Severity:	3(A)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	32	Year:	1986
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	Other (alcohol consumption - BAC unknown)	Vehicle Model:	Sprint/ Geo Sprint
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	4	Slope:	Level
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	01	Going straight	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Inattention*

ROADSIDE DEPARTURE: *Right*

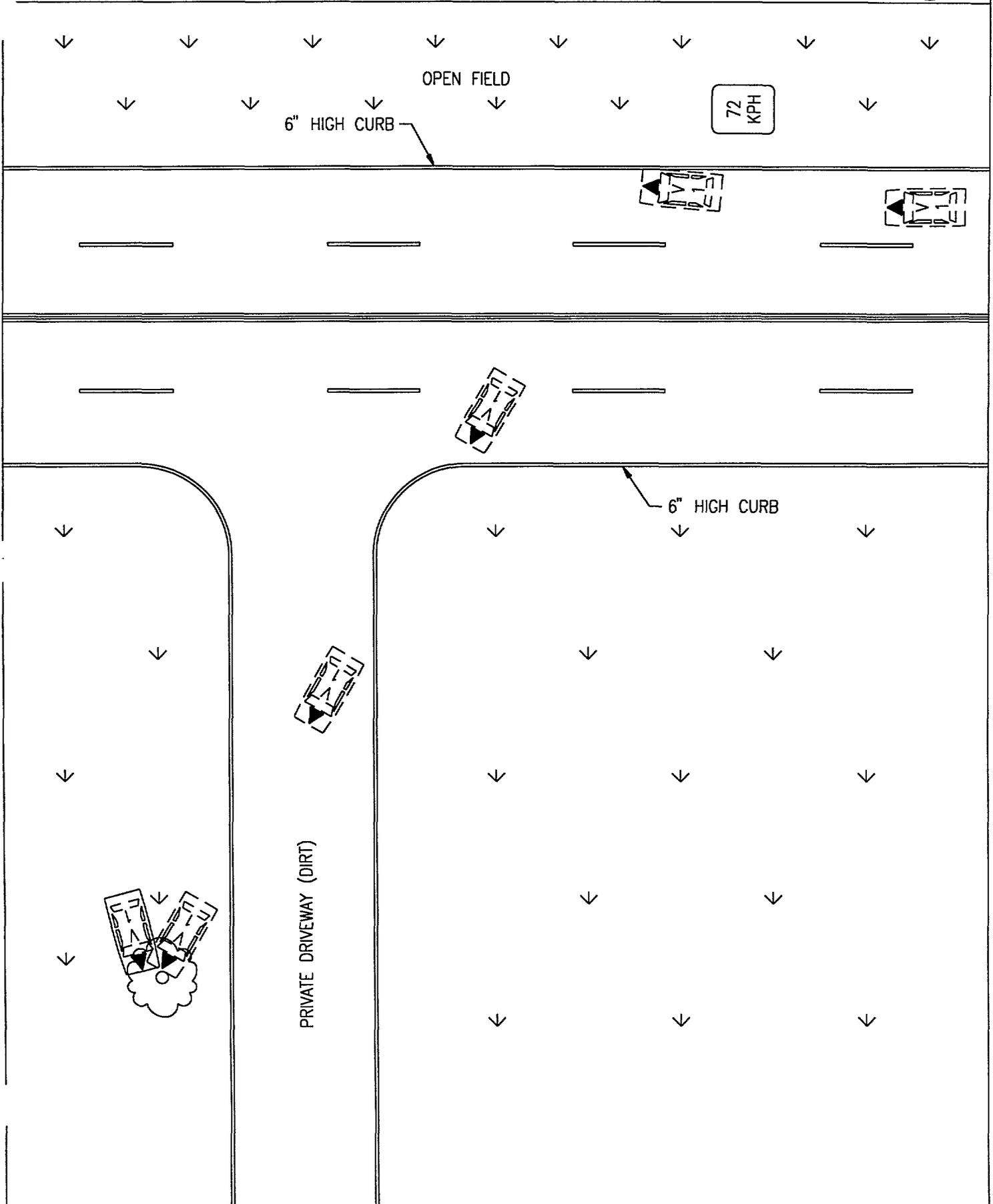
The subject vehicle was traveling south in the right lane of a dry, level, four-lane, undivided, asphalt roadway. The driver dropped a purse on the floor and leaned over to pick it up when the vehicle drifted into the right curb. The driver was thrown to the right side of the vehicle. The vehicle subsequently veered to the left, crossed the travel lanes, traveled across a private driveway and lawn, and struck a large tree. The driver had consumed alcohol. There were no adverse weather conditions, however, the roadway was dark and not illuminated. The causal factor was driver inattention and steered off roadway. A contributory factor was the driver's consumption of alcohol.

ACCIDENT COLLISION DIAGRAM

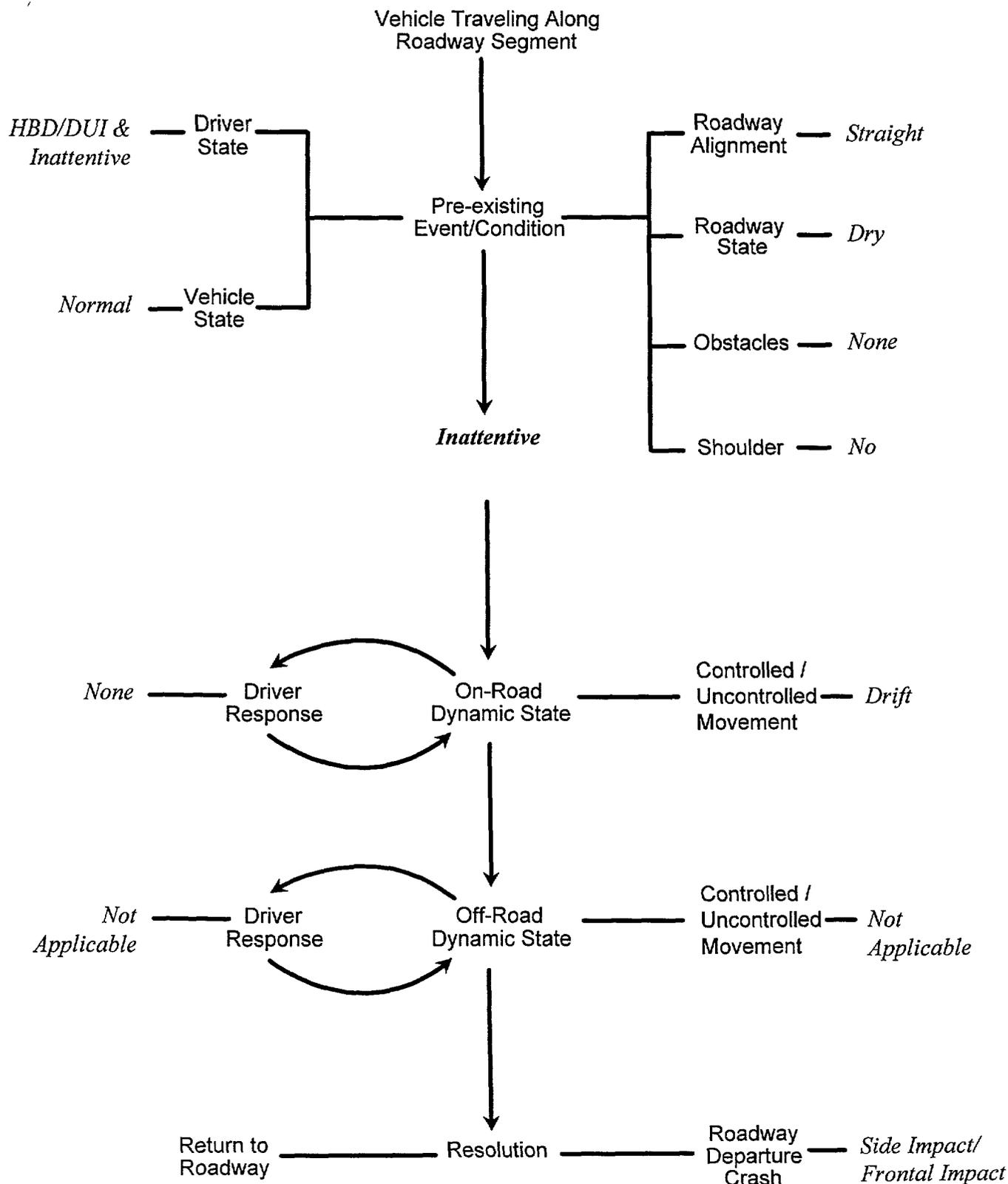
PSU No. 12

Case Number - Stratum 074K

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Alcohol
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	5-4-93	Weather:	Clear/Cloudy
Time:	0200	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	30	Year:	1990
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	Other (alcoh. consumption - BAC unknown)	Vehicle Model:	C, K, R, V-series
Familiarity with Road:	Unknown	ABS:	Unknown
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Curve Right
No. of Lanes:	1	Slope:	Grade
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	09 Braking and steering right		
GV64:	13 Negotiating a curve		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Vehicle Speed - Speed and Alcohol*

ROADSIDE DEPARTURE: *Left*

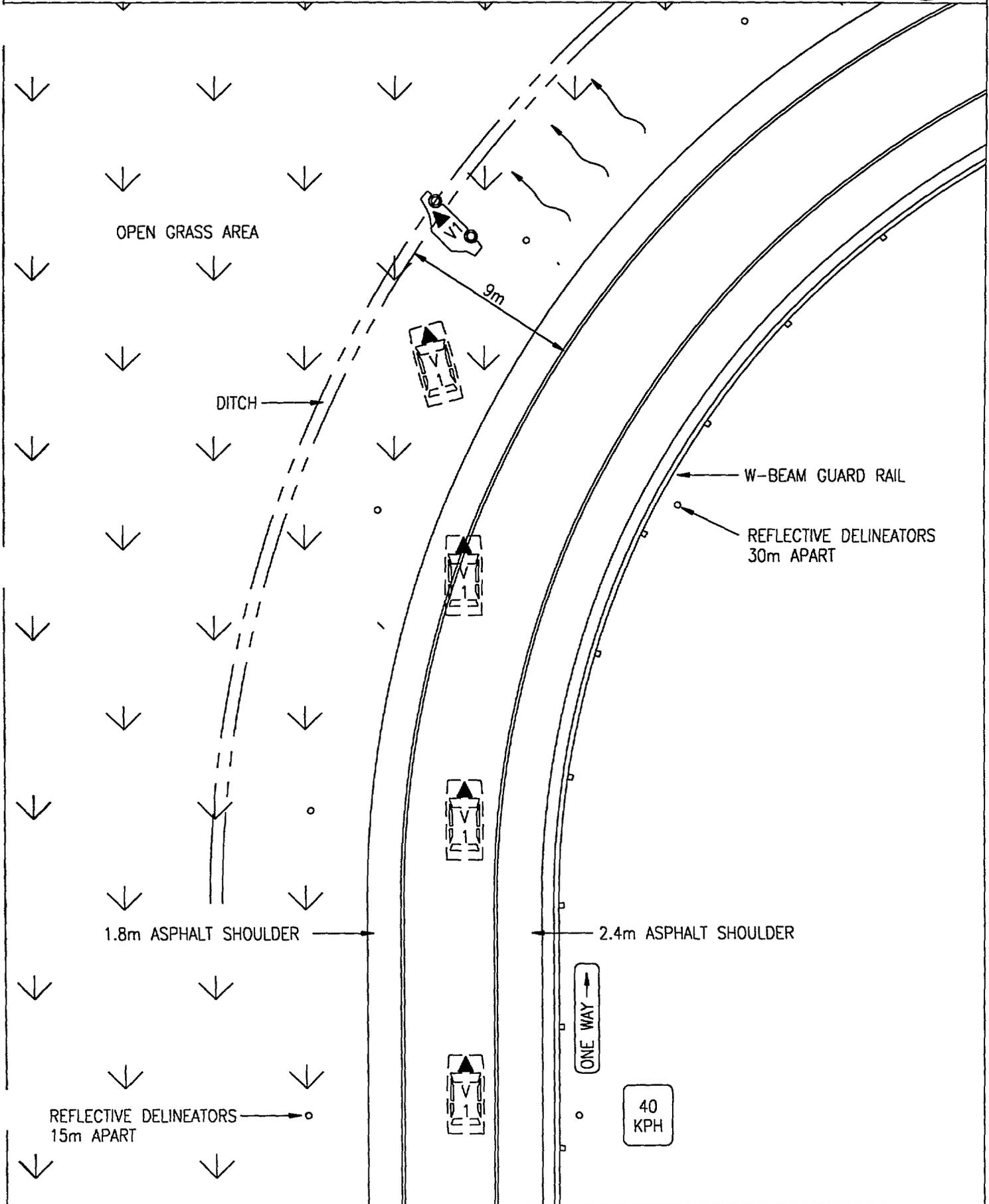
The subject vehicle was traveling west on a ramp connecting two interstate roadways during the evening hours. The dry, concrete, single-lane roadway was not illuminated, curved to the right, and had a +2% slope. The vehicle departed the left side of the roadway, traveled down a -8% embankment, struck a ditch and rolled over. There were no sight lines or roadway restrictions. The off road terrain was open with no obstacles in the grassy area. The driver had consumed alcohol prior to the crash and lost control of the vehicle. The causal factor was excessive speed for the ramp and alcohol consumption.

ACCIDENT COLLISION DIAGRAM

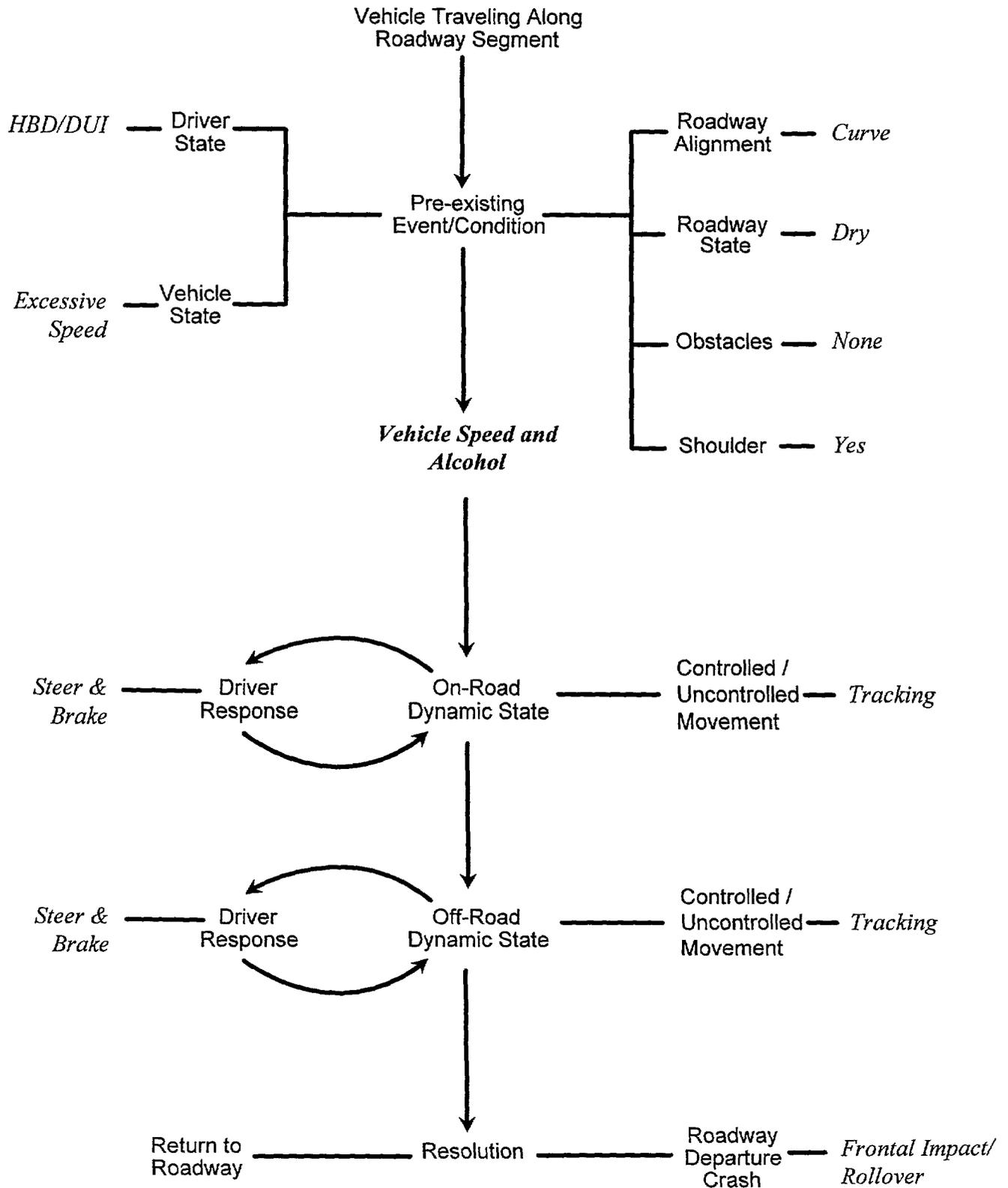
PSU No. 12

Case Number - Stratum 079E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane - Same Travel Direction*

ROADSIDE DEPARTURE: *Right*

General Accident information			
Date:	7-6-93	Weather:	Clear/Cloudy
Time:	2115	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	21	Year:	1980
Driver Sex:	Male	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Chevette
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	Other Failure
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	72 km/h
Cluster Variables			
GV14:	09 Braking and steering right		
GV64:	01 Going straight		
GV65:	04 This vehicle loss of control due to non-disabling vehicle problem		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR: *Evasive Maneuver - Vehicle Encroaching into Lane -
Same Travel Direction*

ROADSIDE DEPARTURE: *Right*

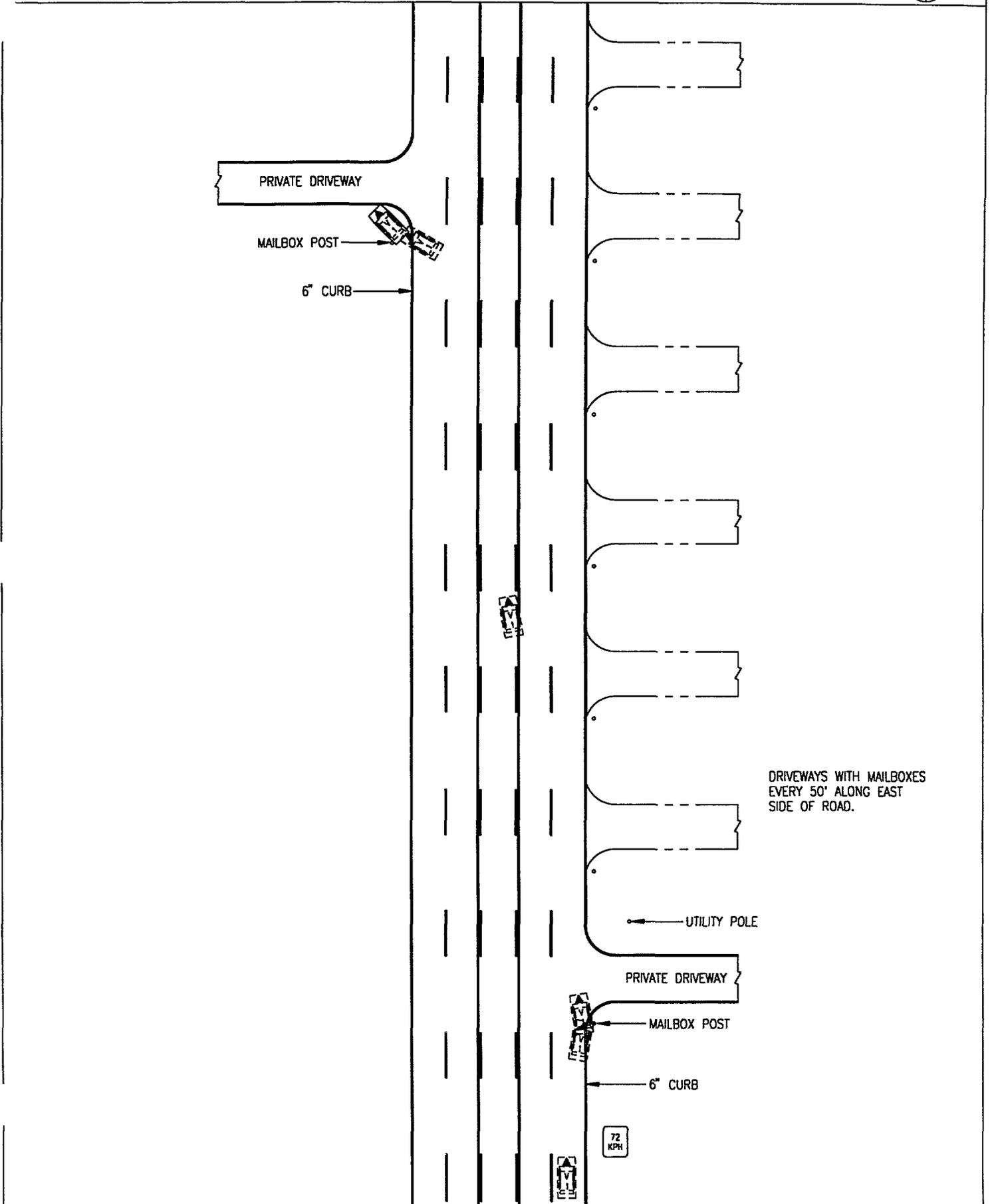
The subject vehicle was traveling north on a dry, urban, divided, concrete roadway during daylight hours. The driver entered the roadway from a service station and accelerated the vehicle to a speed of 48-56 km/h (30-35 mph) in the outboard lane. The driver was operating the vehicle with defective brakes and approached slower moving traffic from the rear. The driver was inattentive to the driving task and steered off the road to the right to avoid the non-contact vehicles. The vehicle struck a mailbox that was located at the right road edge. The driver redirected the vehicle to the left and traveled along the roadway, before impacting another mailbox located adjacent to the left road edge.

ACCIDENT COLLISION DIAGRAM

PSU No. 12

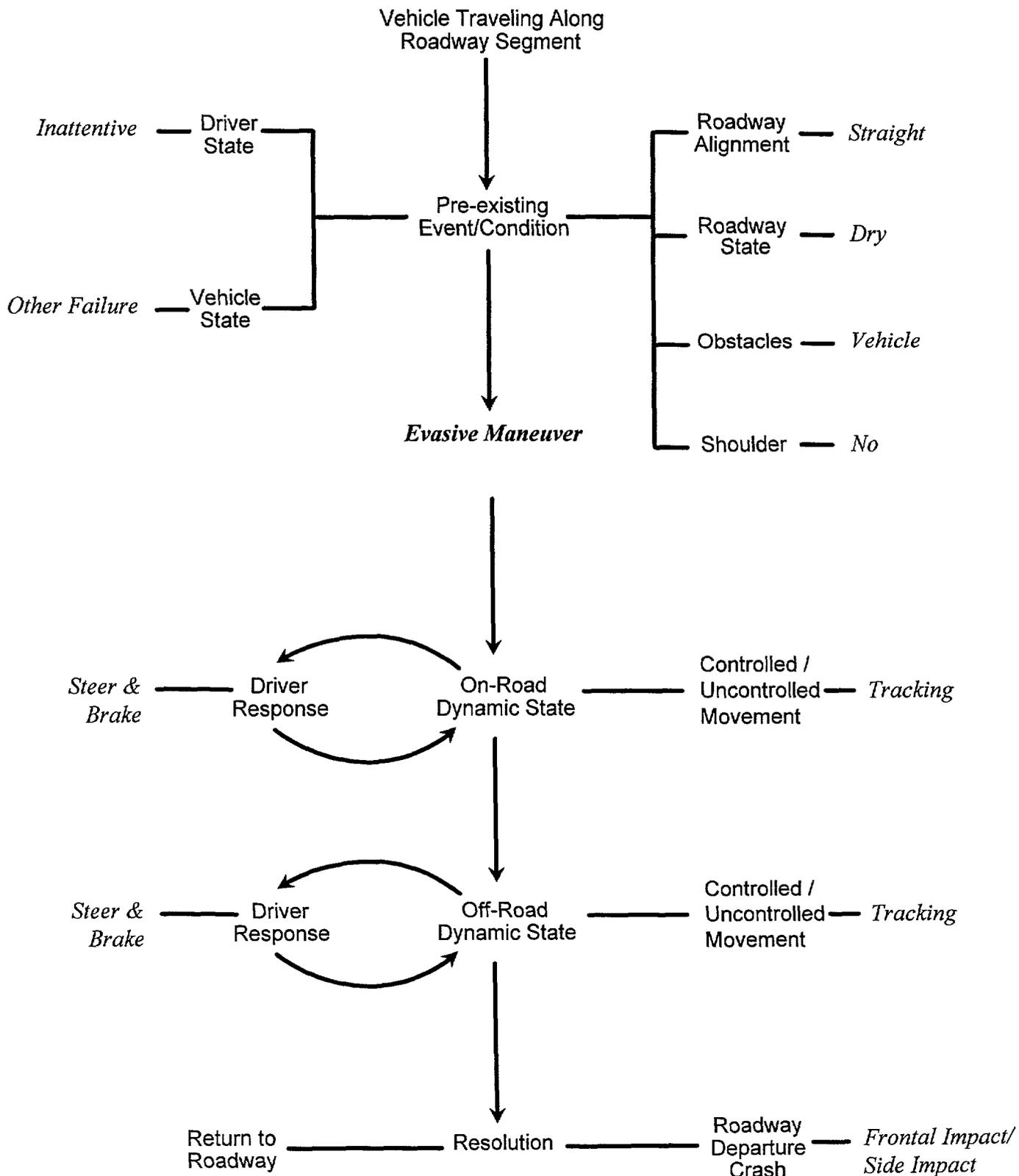
Case Number - Stratum 113H

Indicate North 



DRIVEWAYS WITH MAILBOXES
EVERY 50' ALONG EAST
SIDE OF ROAD.

Vehicle Dynamic Scenario



CAUSAL FACTOR: *Driver Relinquishes Steering Control - Other*
ROADSIDE DEPARTURE: **Left**

General Accident Information			
Date:	7-2-93	Weather:	Clear/Cloudy
Time:	0125	Surface Condition:	Dry
Accident Type:	End Departure	Lighting:	None
Accident Severity:	2 (B)	Land Use:	Urban
Driver/Occupant Information		Vehicle Information	
Driver Age:	30	Year:	1989
Driver Sex:	Female	Vehicle Make:	GMC
Impairment:	Unknown	Vehicle Model:	Jimmy
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Level
		Speed Limit:	40 km/h
Cluster Variables			
GV14:	01	No avoidance actions	
GV64:	13	Negotiating a curve	
GV65:	12	This vehicle traveling off the edge of the road on the left side	
GV66:	0	No avoidance maneuver	
GV67:	0	No avoidance maneuver	

CAUSAL FACTOR: *Driver Relinquishes Steering Control - Other*
ROADSIDE DEPARTURE: *Left*

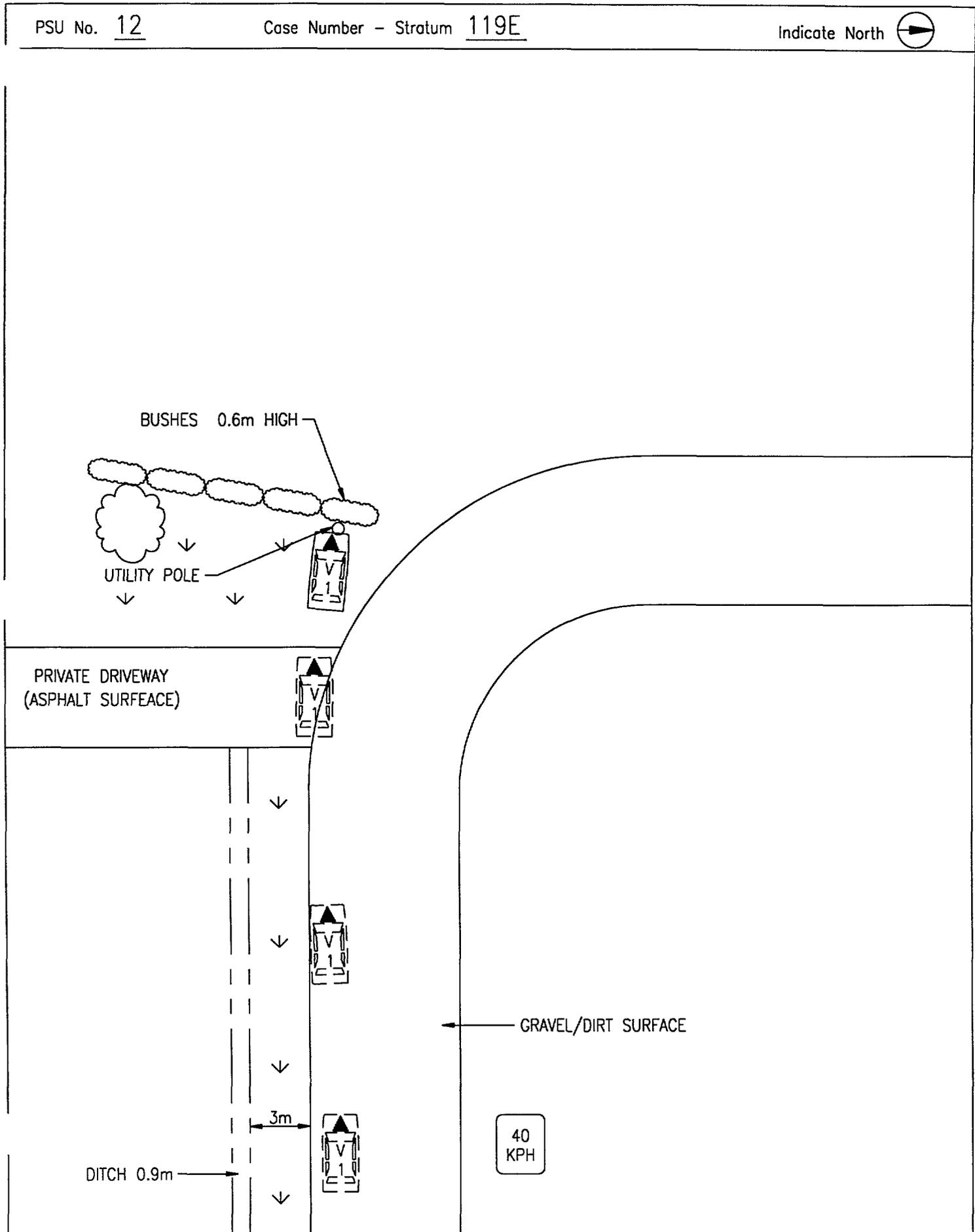
The subject vehicle was traveling on a dry, gravel road surface. The driver failed to initiate a turning maneuver on a 90 degree curve. Based on the roadway geometry and the location of the struck pole, it would appear that the driver was traveling on the left side of the roadway and departed the left road edge as the road curved to the right. The vehicle crossed a driveway and struck the pole with its center frontal area. The PAR indicated that the driver had been drinking, however, no BAC test was offered.

ACCIDENT COLLISION DIAGRAM

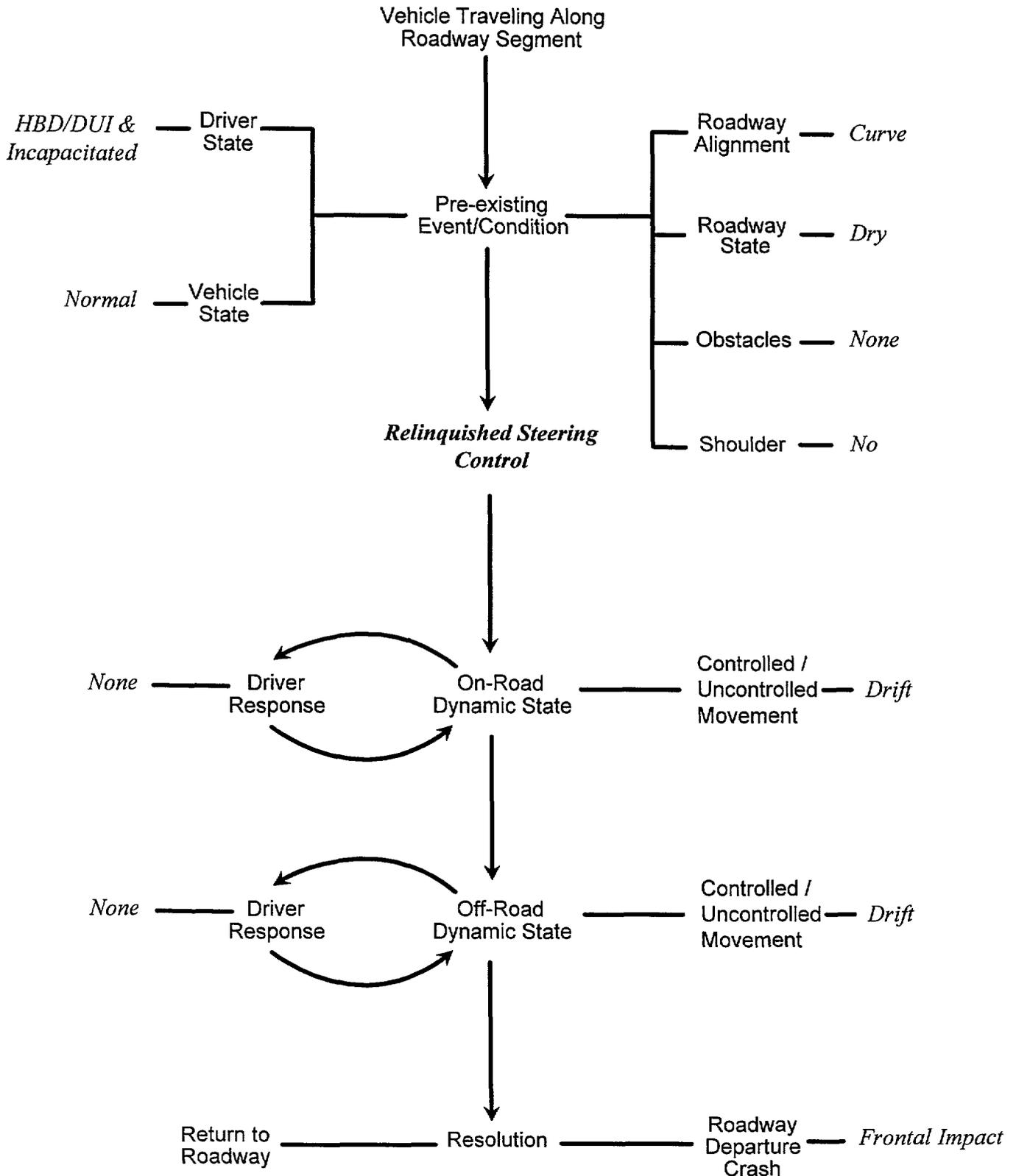
PSU No. 12

Case Number - Stratum 119E

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Lost Directional Control
ROADSIDE DEPARTURE: Left

General Accident Information			
Date:	7-7-93	Weather:	Clear/Cloudy
Time:	1135	Surface Condition:	Dry
Accident Type:	Drive Off Road	Lighting:	Daylight
Accident Severity:	3 (A)	Land Use:	Rural
Driver/Occupant information		Vehicle Information	
Driver Age:	45	Year:	1992
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Cavalier
Familiarity with Road:	Unknown	ABS:	Yes
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median) :	Not divided	Alignment:	Straight
No. of Lanes:	2	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	06 Steering left		
GV64:	01 Going straight		
GV65:	12 This vehicle traveling off the edge of the road on the left side		
GV66:	1 Tracking		
GV67:	4 Vehicle departed roadway		

CAUSAL FACTOR; *Lost Directional Control*
ROADSIDE DEPARTURE: *Left*

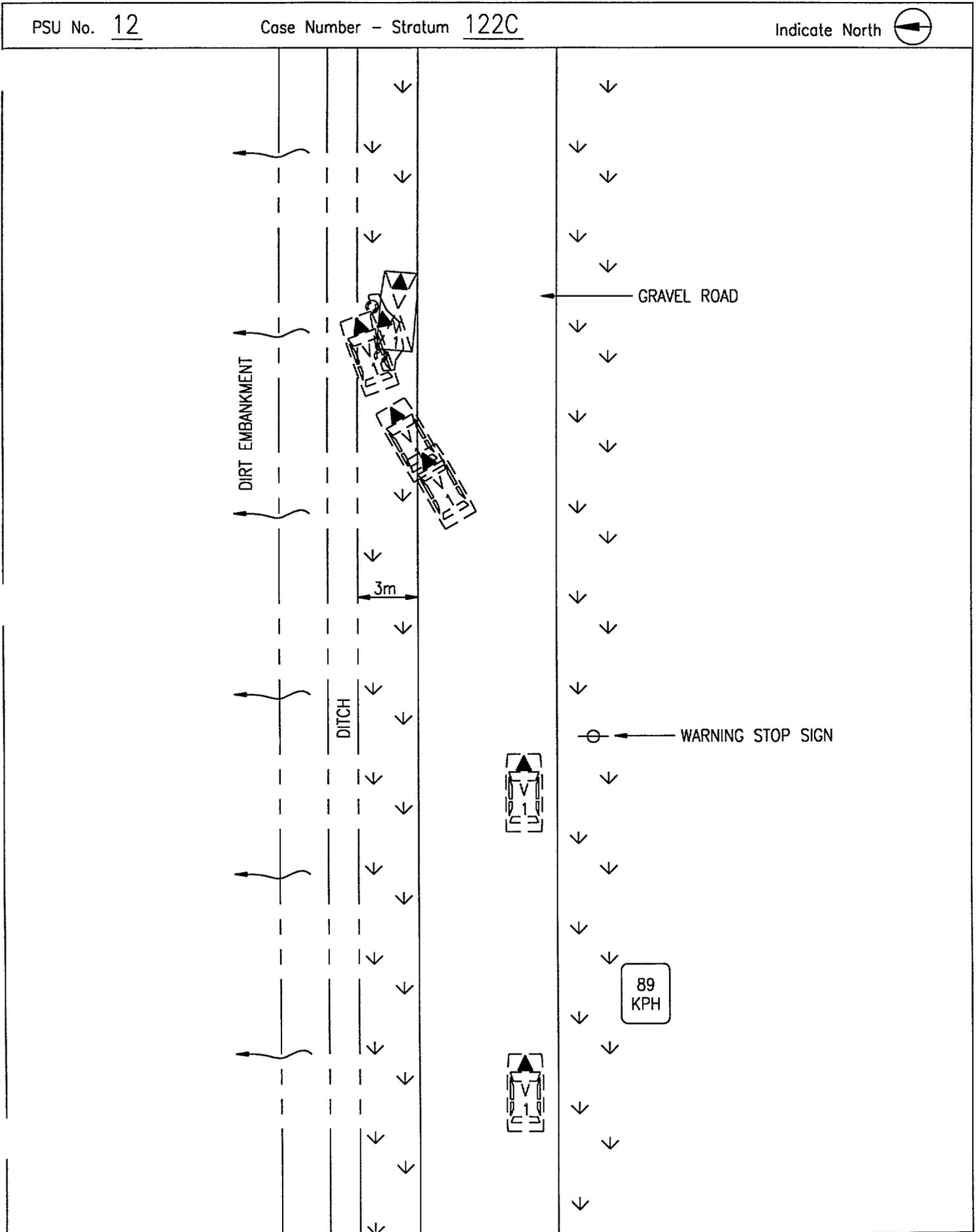
The subject vehicle was traveling in an easterly direction on a narrow, two-lane dirt/stone/gravel roadway during daylight hours. The road was straight and dry with a -1% slope. There were no shoulders and ditches bordered both road edges. The vehicle overrode a washboard area which caused the driver to lose directional control. As a result, the vehicle crossed the westbound travel lane and departed the left road edge. The driver attempted to brake, but the vehicle exited the road in a tracking mode, entered the ditch, and overturned onto its roof.

ACCIDENT COLLISION DIAGRAM

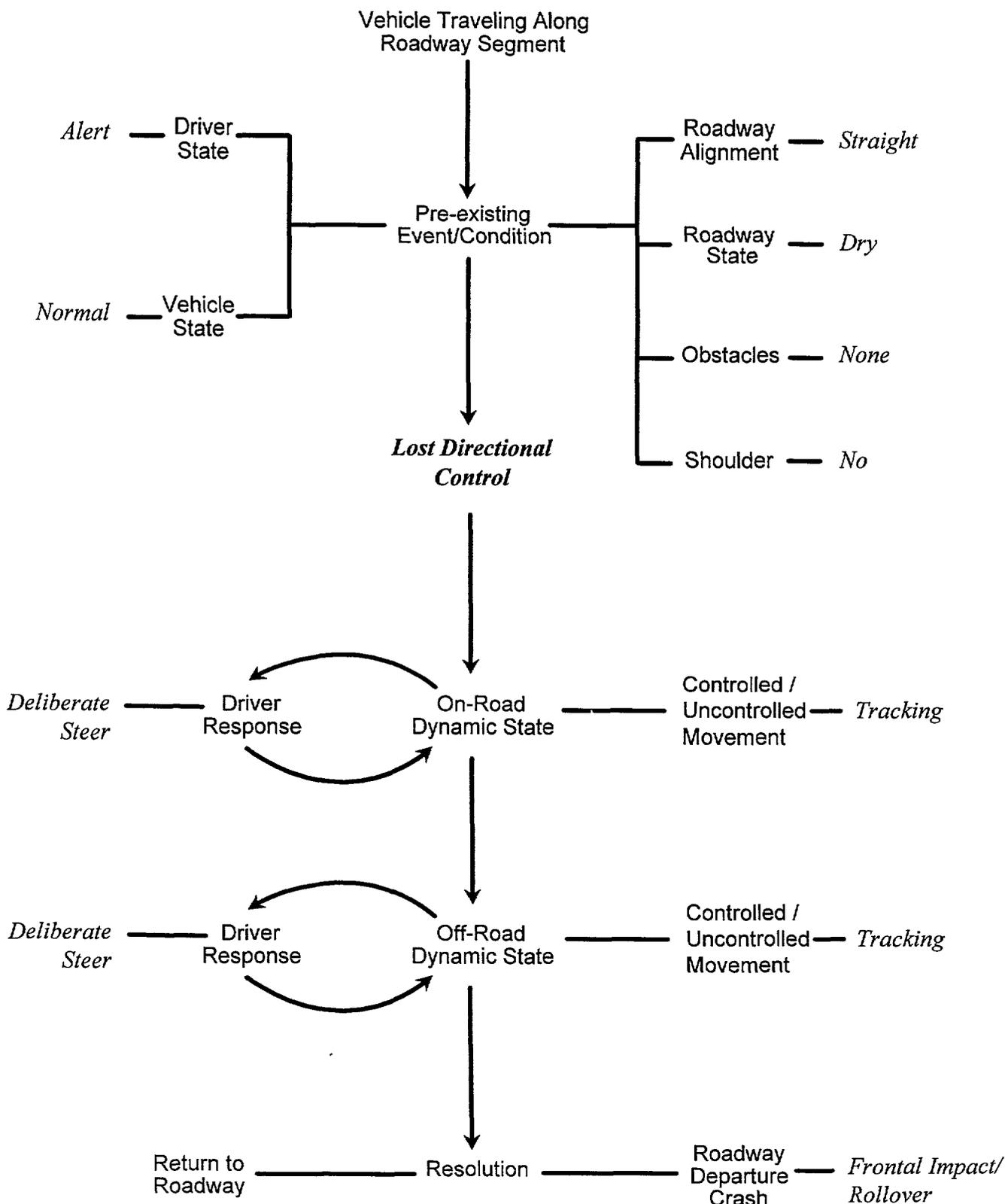
PSU No. 12

Case Number - Stratum 122C

Indicate North 



Vehicle Dynamic Scenario



CAUSAL FACTOR: Vehicle Speed - Speed and Driver Inexperience
ROADSIDE DEPARTURE: Right

General Accident Information			
Date:	8-6-93	Weather:	Clear/Cloudy
Time:	0920	Surface Condition:	Dry
Accident Type:	Control/Traction Loss	Lighting:	Daylight
Accident Severity:	0 (0)	Land Use:	Rural
Driver/Occupant Information		Vehicle Information	
Driver Age:	16	Year:	1990
Driver Sex:	Female	Vehicle Make:	Chevrolet
Impairment:	None	Vehicle Model:	Lumina
Familiarity with Road:	Unknown	ABS:	No
No. of Occupants:	1	Defects:	No
Roadway Information			
Trafficway Type (Median):	Flush or curb	Alignment:	Straight
No. of Lanes:	3	Slope:	Grade
		Speed Limit:	89 km/h
Cluster Variables			
GV14:	09	Braking and steering right	
GV64:	15	Merging	
GV65:	13	This vehicle traveling off the edge of the road on the right side	
GV66:	1	Tracking	
GV67:	4	Vehicle departed roadway	

CAUSAL FACTOR: *Vehicle Speed - Speed and Driver Inexperience*
ROADSIDE DEPARTURE: *Right*

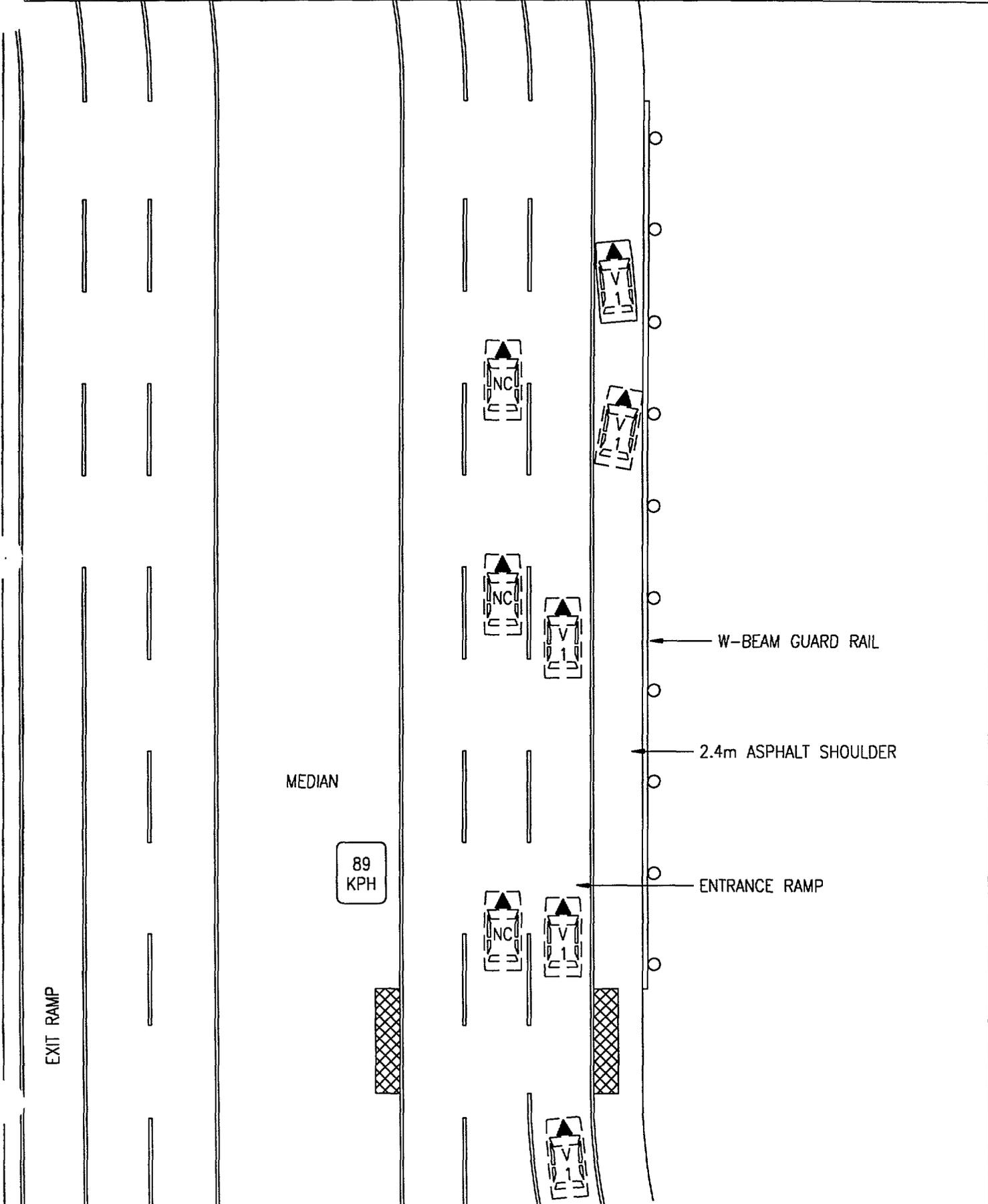
The subject vehicle was entering the outboard lane of a divided expressway from a one-lane entrance ramp. As the driver entered the expressway, there was a bridge rail approximately 0.6 m outboard of the right road edge, and a tractor-trailer was traveling in the center lane. The driver was intimidated by the truck and felt sandwiched between the truck and the bridge. The driver braked and steered right to avoid the tractor-trailer, departed the right road edge, and struck a W-beam guardrail. Driver inexperience was the primary causal factor as the tractor-trailer remained in its travel lane and did not encroach into the driver's lane.

ACCIDENT COLLISION DIAGRAM

PSU No. 12

Case Number - Stratum 132G

Indicate North 



Vehicle Dynamic Scenario

