
South Jersey Transportation Planning Organization

2007 Road Safety Audit

**Dennisville-Petersburg Road (CR 610)
Dennis Township, Upper Township,
Borough of Woodbine,
Cape May County**



Prepared By:



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In Association with:



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Introduction

Orth-Rodgers & Associates, Inc. (ORA) was selected by the South Jersey Transportation Planning Organization (SJTPO) to conduct their 2007 Road Safety Audit (RSA) program. The sections of roadway to be studied were selected by SJTPO based on a number of factors considered important to the safety and future development of the roadways. Among the factors considered were crash data, traffic volume growth, recent and planned future development along the roadway, and local cooperation and control. Except at the intersection of a state highway with the study roadway, state highways were excluded from the process. County and local officials cooperated with the SJTPO in identifying roads that meet these parameters.

Four roadway sections were chosen for the 2007 audits. Two of the roadways are located in Cape May County; one is in Salem County, and one in Atlantic County. The four roadway sections are:

1. Dennisville-Petersburg Road (CR 610) entire length, between Route 47 and Tuckahoe Road (CR 631) (MP 0.00-7.77), in the Townships of Dennis and Upper, Borough of Woodbine, Cape May County. Scattered rural, undeveloped portions of the road were scanned.
2. Shunpike Road (CR 620) entire length, between Indian Trail Road (CR 618) and Dias Creek Road (CR 612) in Township of Middle, Cape May County.
3. Fire Road (CR 651), between Tilton Avenue (CR 563) and Delilah Road (MP 7.91-9.97) in the Township of Egg Harbor, Atlantic County. Additionally, a section from Mill Road to Tilton Road (MP 6.67-7.91) is to be scanned.
4. Buck-Centerton Road (CR 553) between the Cumberland County border and the Gloucester County border (MP 26.97-34.78) in the Townships of Pittsgrove and Upper Pittsgrove. This includes a very short section of CR 540 (MP 25.90-25.98). Approximately two miles of the road will be audited and the remainder scanned.

Each studied roadway will have a separate report, but will share basically the same introduction, background section, format and some text.

Safety audits serve to address the safe operation of the roadways and to ensure a high level of safety for all road users. The process of a safety audit is two-fold: 1) to conduct a formal examination of highway features and the surrounding environment that increases the potential for crashes; and, 2) to identify countermeasures that will reduce or eliminate the probability of such crashes. According to the Federal Highway Administration (FHWA), the formal definition of a road safety audit is as follows:

“A Road Safety Audit is the formal examination of an existing or future roadway or traffic project by an independent team of trained specialists.”¹

To accomplish these goals, the audit team assesses the safety performance history as well as the future crash potential of a roadway and prepares a report that documents the safety deficiencies and appropriate countermeasures. The purpose of the 2007 audit is to identify potential safety deficiencies along the selected sections of the four roadways.

There are three primary parts of an audit: 1) the data collection and analysis phase; 2) the field view (conducted by the team); and, 3) the preparation of the report and findings.

The **data collection phase** is performed prior to the audit team conducting a field view of the entire roadway. The data is intended to assist the team in identifying potential safety issues, as well as to provide a factual and historic component of the study. Traffic count and crash data are collected, and a capacity analysis of major intersections is performed. The traffic counts are used to assist in analyzing solutions for the intersections, as well as aid in identifying the most congested sections of the roads. The crash data assists the team in identifying specific areas and/or conditions that warrant close scrutiny that might have otherwise been overlooked. The capacity analysis of intersections identifies how well the intersections are operating and when

¹ Federal Highway Administration, Road Safety Audits and Road Safety Audit Reviews, EDL #12345 FHWA XX-03-999

and where improvements may be needed. Based on an analysis of all of the data, the audit team can conduct a productive and comprehensive evaluation of the roads being studied. A multi-disciplinary team conducts the field view. In this case, the team walked from Rt 47 to the Dennis Township Municipal Complex and drove the remaining section several times discussing observations and taking notes for inclusion in the report. The team leader then prepared a **draft report** that documented the audits findings and recommended actions. The draft report was distributed to the team members for their review and comments. A final report was then prepared by the team leader incorporating the agreed upon draft report comments.

BACKGROUND INFORMATION

Prior to the audit, ORA e-mailed a list of questions to the County seeking to gather background information on Dennisville-Petersburg Road. The questions asked were:

- Why was the road chosen for the audit?
- What problems exist on the road?
- What areas should be given special attention?
- Has the roadway changed in the last three years?
- Are there any projects pending or anticipated for the roadway and their current status?
- Have any of the traffic control devices or regulations been changed in the last three years (i.e., signals, speed limits, pavement markings, etc.)?
- Was there any development on the road in the last three years, or any proposed development on the road or in the area that has or will impact traffic in the future?
- Are any recent traffic counts available?
- Have any recent traffic studies been conducted on the road?
- What plans, if any, are available for the road?
- At what locations should new traffic counts, either turning movement or ATRs be conducted?

The same questions were again asked at the workshop on the day of the audit to ensure that no available data was missing. Since Cape May County had already participated in three previous road safety audits, ORA did not schedule a general kick-off meeting. Additionally, a pre-audit

information package was prepared and distributed in advance of the workshop and field view. The package included a brief explanation of what a safety audit is, why safety audits are conducted, and the process involved. It also included a chart of three year crash trends, crash occurrence by month, by day of the week, by time of day, by surface condition, by light condition, by crash severity, by crash type, and by closest intersection. All team members were asked to review the information package prior to attending the workshop and audit. Since most of the scheduled team members had already participated in at least one audit, and all stakeholders received the information package, the workshop and field views were scheduled to take place on the same day.

DENNISVILLE-PETERSBURG ROAD (CR 610)

Dennisville-Petersburg Road (CR 610) is under the jurisdictional control of Cape May County. The State of New Jersey's straight-line diagram designates CR 610 as a north-south road. However, the road is signed as a west-east road, therefore, we will refer to it as a west-east road in the report. The entire length of the road in Cape May County was audited. This extends between Route 47 on the southern end of the study area and Tuckahoe Road (CR 631) at the northern end. The road is classified as a rural major collector from Route 47 (MP 0.0) to just south of Perry Road (MP 0.0 to MP 6.30) and urban collector from just south of Perry Road to Tuckahoe Road (CR 631) (MP 6.30 to MP 7.77). The total length of the study area is 7.7 miles.

Cr 610 is basically a two-lane road with shoulders. The width of the shoulder varies along the roadway, but in most places is less than five feet wide. There are deceleration lanes into several driveways along the road, the most significant driveways being at the Dennis Township Municipal Complex and the Tuckahoe Sand and Gravel Plant.

The sand and gravel plants and the landfill appear to be the only significant traffic generators along the road.

The curbline development is described as rural. There are traffic signals at the intersections of Route 47, Route 50 and Tuckahoe Road (CR 631) and a four-way stop supplemented by an intersection control beacon at Woodbine-Ocean View Road (CR 550).

It was ascertained from local members of the audit team that:

- There have been no changes to the traffic controls along the road in the last three years.

The following sections describe the various tasks undertaken by ORA in partnership with the Safety Audit Team and summarize the findings from the audit process in a manner that will allow the responsible agencies and personnel to prioritize implementation of safety enhancements.

Pre-Audit Data Collection and Analysis

Prior to the audit activities on site, ORA collected and reviewed traffic data and other related materials in order to assist the team in conducting the audit. A description of the materials that were reviewed is provided below.

1. Traffic Volume Data

No traffic count data was requested for the road by the audit team members.

2. Traffic Signal

There are three traffic signals along the roadway, at Rt 47, RT 50, and Tuckahoe Road (CR 631). Additionally, there is an intersection control beacon and four-way stop at Woodbine-Ocean View Road (CR 550).

3. Crash Data

SJTPO forwarded to ORA the crash reports from the New Jersey State Police for the years 2003, 2004 and 2005. A summary sheet was prepared for the three-year period. For the three-year period, a total of 33 crashes were plotted on the straight-line plan for the study section of road. Thirteen (13) crashes occurred in 2003, nine (9) in 2004, and 11 in 2005.

The types of crashes are characterized as follows:

0 – fatal crashes

9 – injury crashes

24 – non-injury crashes

2 – left turn type crashes

16 – fixed-object type crashes. No concentrations.

10 – struck deer type crashes. No concentrations.

5 - other type crashes. No concentrations.

A review of the crashes established the following:

- ♦ The month with the most crashes (9) was December. There were no crashes in March, May, June or September.
- ♦ The day of the week with the most crashes (8) was Thursday.
- ♦ The highest frequency of crashes (5) occurred between 11:00 PM and 12:00 AM (midnight).
- ♦ The percentage of crashes during hours of darkness (57%) was almost double the statewide average for county roads (approximately 30%).
- ♦ The percentage of crashes for wet surface conditions (9%) was much less than the statewide average for county roads (approximately 24%).
- ♦ The percentage of crashes for snowy or icy surface conditions (18%) was over three times the statewide average for county roads (approximately 5%).
- ♦ The percentage of crashes with injuries (27%) is consistent with the statewide average for county roads (approximately 30%).
- ♦ The percentage of right angle type crashes (0 %) is much less than the statewide average for county roads (approximately 21%).
- ♦ The percentage of same directional crashes (0%) is much less than the statewide average for county roads (approximately 29%).
- ♦ The percentage of left-turn crashes (6%) is consistent with the statewide average for county roads (approximately 6%).
- ♦ The percentage of sideswipe type crashes (0%) is less than the statewide average for county roads (approximately 12%).

- ♦ The percentage of fixed-object type crashes (48%) is four times the statewide average for county roads (approximately 12%).
- ♦ The percentage of struck animal (deer) type crashes (33%) is eight times greater than the statewide average for county roads (approximately 4%).
- ♦ The percentage of other type crashes (15%) is nearly four times the statewide average for county roads (approximately 4%).

4. **Other Information**

Additional materials reviewed by ORA prior to the formal audit process included videotapes taken by A-TECH Engineering, Inc. of both directions of travel for the entire study area.

Materials listed above are included in the Appendix.

Audit

On April 22, 2007, the Safety Audit Team met in the Dennis Township Administration Building at 571 Petersburg Road to formally conduct the audit. The meeting commenced at 9:30 AM with brief statements by ORA representatives who reiterated the importance of RSAs and outlined the objectives of the safety audit. There were brief introductions by team members followed by an extensive review and discussion of materials described in the previous section. The team then drove to the intersection of RT 47 to begin the audit. Cape May County provided a van for the team. Team members are listed below.

SAFETY AUDIT TEAM FOR CR 610

Name	Agency
Tom Brennan	Cape May County
Dale Foster	Cape May County
Ron Hearon	Cape May County
Joseph J. Alessandrino	Dennis Township Administrator
William Pikolycky	Mayor Woodbine Borough
Bill Schiavi	SJTPO
Norman Deitch	Orth-Rodgers & Associates, Inc.
George Strathern	Orth-Rodgers & Associates, Inc.

During the field views, team members identified features on the roadway and its surrounding environment that could contribute to the occurrence or relative severity of roadway crashes. At the intersections and mid-block locations, the Audit Team identified safety deficiencies and inappropriate traffic signs, as well as other items that were felt to be inconsistent with effective road function and use. A variety of safety improvement measures were discussed with field notes and digital photographs being taken by team members.

At the completion of the audit, the team leader recapped the findings of the audit with the team.

The team leader informed the team members on the next step in the audit process; ORA will prepare a draft report summarizing the findings from the audit process and forward the report to all team members for their review and comments.

On April 30, 2007, Dale Foster, Norman Deitch and George Strathern conducted a night audit. The goal was to check the retroreflectivity of the street signs, pavement markings, and condition of the raised pavement markers (RPMs). In addition, the need for street lighting was checked and lights adjacent to the roadway on private property were checked to ensure that they did not create bright areas that could distract drivers. The team also looked for issues that would only be apparent during hours of darkness, such as clearly defined roadway alignment, ineffective street lighting, etc.

The next section of the report summarizes the findings from the daytime and nighttime audits of Dennisville-Petersburg Road (CR 610).

Findings

The findings from the Dennisville-Petersburg Road (CR 610) safety audit are presented on the following pages in the approximate order of their location along the roadway beginning at RT 47 and ending at Tuckahoe Road (CR 631).

SAFETY ISSUE		REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
1	General comment - Sign installation. Many of the signs along the road are installed as “bendaway” rather than “breakaway.” Many installed as “breakaway” are installed incorrectly with the stub too far out of the ground or on the wrong side of the post.	Consideration should be given to inventorying the method of sign installation along the entire road and taking steps to properly install all signs as “breakaway” in accordance with the most current NJDOT standards and the MUTCD.		X			X	
2	At the intersection of Rt 47 – local team members stated that no more than one or two left-turning trucks could get through the signal during each cycle.	This matter should be brought to the attention of NJDOT along with a request that they (1) have the installation inspected to see if it is operating in accordance to the authorized timing directive, (2) that a traffic count be conducted at the intersection and that the intersection be observed during the periods of peak traffic flow to determine if revisions in the signal timing at the intersection are needed.	X			X		
3	Westbound approaching Rt 47 - “JCT 47” route marker assembly installed less than 100 feet in advance of the intersection.	Relocate route marker assembly to a minimum of 250 feet in advance of the intersection.	X			X		
4	Westbound side guide rail opposite Main Street - need for guide rail is questionable and the end treatments are not to current standards.	The need for the guide rail should be evaluated and, if retained, end treatments should be upgraded to current standards.		X			X	
5	Southeast corner of Main Street - team members related that property owner has complained that trucks turning right from Main Street cut the corner short damaging the sidewalk on that corner.	Install delineators and/or curb on the corner.	X			X		

SAFETY ISSUE		REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
6	Westbound side just west of Main Street- “ To 47” route marker assembly is worn.	Replace with new route marker assembly	X			X		
7	Eastbound side guide rail opposite Fidler Road - need for guide rail is questionable and the end treatments are not to current standards.	The need for the guide rail should be evaluated and, if retained, end treatments should be upgraded to current standards.		X			X	
8	Northwest corner of Fidler Road guide rail - need for guide rail is questionable and the end treatments are not to current standards.	The need for the guide rail should be evaluated and, if retained, end treatments should be upgraded to current standards.		X			X	
9	Northwest corner of Fidler Road (CR 638)- vegetation on corner within the corner sight triangle restricts visibility across that corner of the intersection.	Consideration be given to contacting the property owner regarding the need to maintain the corner sight triangle.	X				X	
10	Eastbound side just east of Fidler Road (CR 638)-confirming route marker assembly “EAST 610” is worn.	Replace with new route marker assembly.	X			X		
11	Southwest corner of Hall Avenue- large stone partially exposed on edge of the road could damage tires.	Remove stone. Consideration be given to installing curbing on that corner of the intersection.	X			X		
12	Westbound side just east of CR 638- “JCT 638” route marker assembly is worn.	Replace with new route marker assembly.	X			X		
13	Eastbound side in front of house number 678- 4-foot high stump of tree just off of the edge of road.	Contact the property owner regarding the removal of the stump.	X				X	
14	Westbound side just east of Hall Road – approximately 300 feet of sidewalk cracked, uneven and deteriorated.	Consideration be given to replacing the sidewalk.		X			X	
15	Eastbound side guide rail opposite Academy Road - need for guide rail is questionable and the end treatments are not to current standards.	The need for the guide rail should be evaluated and, if retained, end treatments should be upgraded to current standards.		X			X	

SAFETY ISSUE		REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
16	Along the Academy Road approach- stop line is worn and too close to intersection.	Install new stop line several feet back from the existing stop line location.	X			X		
17	Westbound side approximately 150 feet east of Academy Road- empty broken off signpost.	Remove signpost.	X			X		
18	Eastbound side approaching highway-rail grade crossing- the highway-rail grade crossing pavement markings are worn.	Re-install pavement markings.	X			X		
19	Highway-rail grade crossing is deteriorated.	Consideration be given to repairing highway-rail grade crossing.			X		X	
20	Eastbound side just north of highway rail grade crossing-empty signpost.	Remove post.	X			X		
21	Section of road between RT 47 to RxR crossing is much more residential and has more pedestrian activity then the rest of the route.	Consider the installation of pedestrian advance warning sign with next ½ mile plate.	X				X	
22	Westbound side approaching highway rail grade crossing- the highway-rail grade crossing pavement markings are worn.	Re-install pavement markings.	X			X		

SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
		LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
23	Westbound side- there is an existing "REDUCED SPEED AHEAD" sign approximately 1000 feet east of the highway-rail grade crossing. The speed limit changes from 50 MPH east of the crossing to 25 MPH west of the crossing. Local team members stated that speeding west of the grade crossing is a constant complaint of the residents along the section of road west of the crossing.	X				X	
24	Eastbound approaching driveway to the municipal complex- there is a deceleration lane separated from the through lane by a short skip line.	X			X		
25	Eastbound side at driveway to municipal complex-a short acceleration lane separated from through lane by skip line.	X			X		
26	In the vicinity of milepost 2.3 there are two pipes installed beneath the road approximately 100 feet apart that surface close to the edge of the road.		X			X	
27	Eastbound side between Buck Road and Doe Road- there are several sections of guide rail. The need for the guide rail is questionable.		X			X	

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
28	Eastbound side approximately 500 feet west of CR 550-driveway with curbing on radii. Apron to driveway is a mix of gravel and shells. Local team member mentioned that the apron was suppose to be paved.	Contact responsible party regarding paving the apron area.	X			X		
29	Eastbound side approaching CR 550- "JCT 550" sign assembly is worn.	Replace sign assembly.	X			X		
30	Eastbound side at CR 550- "CR 550 " with double-headed arrow plate, arrow plate is worn.	Replace arrow plate.	X			X		
31	Eastbound side just west of CR 550 - inlet with grate that is not bicycle safe.	Consideration should be given to replacing existing inlet grate with bicycle safe grate.	X			X		
32	Westbound side just west of CR 550 - inlet with grate that is not bicycle safe.	Consideration should be given to replacing existing inlet grate with bicycle safe grate.	X			X		
33	Bike Path crosses road just west of CR 550- there are no signs identifying the crossing.	Install the appropriate warning signs identifying location as a bike path crossing.	X				X	
34	At CR 550- all stop lines and gore markings are worn.	Re-install stop lines and gore pavement markings.	X			X		
35	Eastbound side just east of CR 550- confirming route marker assembly "EAST 610 " is worn.	Replace sign assembly.	X			X		
36	On both sides of road in the vicinity of milepost 4.0- pipe with concrete head wall on both sides of the road.	Consideration be given to evaluating the need for guide rail at this location.		X			X	
37	Eastbound side at Daley's pit-deceleration lane separated from the through lane by a skip line.	Replace skip line with solid line.	X			X		
38	Eastbound side at Hansons Sand and Gravel- deceleration lane separated from the through lane by a skip line.	Replace skip line with solid line.	X			X		
39	Eastbound side just east of Hansons Sand and Gravel- sand from trucks have filled in swale area.	Re-grade swale area.	X			X		

SAFETY ISSUE		REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
40	Westbound at milepost 5- deceleration lane marked with skip lines.	Replace skip lines with solid line.	X			X		
41	At CR 664- stop line on CR 664 is worn.	Re-install stop line.	X			X		
42	No confirming route marker on CR 610 west of CR 664.	Install confirming route-marker assembly "WEST 610" just west of CR 664.	X			X		
43	At CR 664-berm on northeast corner restricts corner sight distance.	Consideration be given to re-grading the berm to improve corner sight distance.		X			X	
44	At CR 664- local team members stated that intersection has a drainage problem with water lying along the westbound side of the intersection.	Consider corrective action to provide better drainage at the intersection.		X			X	
45	Eastbound side at CR 664- evidence of damage to shoulder caused by eastbound vehicles passing to the right of left turning vehicles.	Consideration be given to widen the shoulder area along the eastbound side of the road.		X			X	
46	Just east of milepost 6 (in front of house # 900)- pipe beneath road surfaces ends close to the edge of road.	Location be evaluated for need for guide rail or lengthen pipe.		X			X	
47	Eastbound just east of mile post 6- speed limit changes from 45 MPH to 35 MPH.	Consideration be given to installing a speed reduction warning sign (R3-6 or R3-5a).	X			X		
48	Eastbound side in from of house number 480- there is a "NO PASSING ZONE " pennant sign installed on the left side of the road in the middle of a no passing zone. This sign belongs at the beginning of the zone.	Remove sign or relocate to beginning of no passing zone.	X			X		
49	In front of house# 480- pipe beneath road surfaces with head wall on both sides of the road.	Location be evaluated for need for guide rail.		X			X	
50	Along both CR 610 approaches to RT 50- there is no "JCT 50" sign assembly.	Install missing sign assemblies.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
51	Eastbound approaching White Pine Avenue- deceleration lane with skip line separating through lane from deceleration lane.	Replace skip line with solid line.	X			X		
52	Eastbound at White Pine Avenue- acceleration lane separated from through lane with skip line.	Remove skip line.	X			X		
53	<p>Old Tuckahoe Road intersection.</p> <p>The curve in the road and the resulting alignment of the pavement marking and the direction that it guides motorist were discussed in some detail. The following items were suggested.</p> <p>Two additional chevron alignment signs be installed on the southeast corner of the intersection; one east of the existing two chevron alignment signs and one west of the two existing chevron alignment signs facing eastbound traffic.</p> <p>The centerline of the road be re-painted farther to the north and installed so that it more closely follows the path of the vehicles using the road.</p> <p>A longer-term improvement would be to address modifying the northwest corner of the intersection to improve the road alignment and thereby ease the curve.</p>	Consideration be given to all of the items listed.			X			X
54	Southwest corner of Old Tuckahoe Road- guide rail parallels curbing on corner. End treatment of guide rail not to current standards and need for guide rail is questionable.	Consideration be given to evaluating the need to retain guide rail and if retained upgrade end treatment to current standards.		X			X	

SAFETY ISSUE		REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
55	Northeast corner of Old Tuckahoe Road - inlet higher then road surface.	Drainage on corner should be checked and if necessary inlet reset lower.	X				X	
56	Northeast corner of CR 631- local team members stated that signal controller and signal standard on that corner has been knocked down repeatedly by turning vehicles.	Consideration be given to improving corner radius and relocation signal controller and standard.			X		X	
57	Southbound on Old Tuckahoe Road- existing stop ahead sign is a word message sign.	Replace with stop ahead symbol warning sign.	X			X		
58	Southbound on Old Tuckahoe Road- STOP sign on left side of road is 24" x 24 ".	Consideration be given to replacing sign with 30" x 30" sign.	X			X		
59	Westbound side of road in front of house # 1023- pipe, headway and ditch.	Location be evaluated for need for guide rail.		X			X	
60	Westbound side at Julie's pit- acceleration lanes with skip lines.	Remove skip and extend edge line back to radius at driveway.	X			X		
61	Westbound side at end of acceleration lane in previous item- SPEED LIMIT 50 sign in from of utility pole at end of acceleration lane.	Install object marker in place of speed limit sign. Relocate speed limit sign.	X			X		
62	Westbound side at mile post 5- driveway with acceleration lane with skip lines.	Remove skip and extend edge line back to radius at driveway.	X			X		
63	Westbound side approximately 300 feet east of mile post five- pipe with head wall.	Location be evaluated for need for guide rail.		X			X	
NIGHTTIME FIELD VIEW IDENTIFIED THE FOLLOWING SAFETY ISSUES								
64	General note-It was learned from Mr. Foster that the County has a contract to replace the lenses in the RPMs along the road.							

65	At intersection of CR 550- There are two "FOUR WAY " plates installed below each stop sign on all of the approaches to the intersection. Also the "FOUR WAY" plates appear small	Replace the two "FOUR WAY " plates below the stop signs with one oversized "FOUR WAY" plate.	X			X		
66	Westbound side west of CR 550 –"JCT 550" route marker assembly, "JCT" plate is worn.	Replace with new plate.	X			X		
67	Northbound on CR 550- airport sign is worn.	Replace with new sign.	X			X		
68	Northbound on CR 550- guide sign is damaged.	Replace with new sign.	X			X		
69	Eastbound approaching grade crossing at milepost 7.22- "DO NOT STOP ON TRACKS" is dirty.	Clean or replace sign.	X			X		
70	Westbound side just west of CR 631- "WEST 610" confirming route marker is worn.	Replace with new route marker.	X			X		
71	Eastbound approaching CR 631- driveway opposite approach could be mistaken for continuation of road.	Install a large double-headed arrow warning sign facing CR 610 to the left of the driveway.	X				X	
72	Westbound approaching Old Tuckahoe Road- curve could be better defined.	Install at least three chevron alignment signs on the left side of the road just west (southwest corner) of the intersection to delineate the change of alignment.	X				X	
73	Because of the change in alignment of CR 610 at the intersection of Old Tuckahoe Road additional highway lighting should be considered.	Consideration be given to installing an additional luminaire at the intersection.	X				X	
74	Westbound approaching CR 550- hospital sign is worn.	Replace with new sign.	X			X		
75	Eastbound approaching Main Street- edge line curves around radius on corner, creating the illusion that the road curves to the right.	Re-install edge line eliminating its curve.	X				X	

Recommendations

As stated earlier, the intent of the road safety audit process is to conduct a formal examination of highway features and the surrounding environment that increase the potential for crashes and identify countermeasures that will reduce (or eliminate) the probability of such crashes. The safety issues identified during the conduct of this audit and included in this report have been organized to provide the convenience and flexibility necessary to allow the implementation of the safety improvements as time and budget limitations allow. To the extent possible, the findings have been separated into line items so that the improvements can be implemented independently as appropriate. Clearly, consolidating a number of the safety recommendations will reduce the overall cost of improvements. We recommend that the appropriate management staff review the findings and decide which items can be completed in the immediate future (within one year). Many of the deficiencies can be corrected in the short term if the roadway owners dedicate both the time and financial resources to the task. The Level of Effort (an estimate of expenditures and man hours) indicated on the finding sheets of the report represent the team's best effort at categorizing each item.

The findings of the report with the greatest potential for reducing the crash experience along the road appear to be items #53, 71, and 72 the short term (signing and pavement marking revisions) and long term (geometric revisions) findings to improve the curve at Old Tuckahoe Road, items# (4, 7, 8, 15, 26, 27, 36, 46, 49, 54, 59, and 63) the removal of unneeded guide rail, the installation of needed guide rail and item # 21 (the installation of warning signs alerting motorist to the possibility of pedestrian activity between RT 47 and the highway-rail grade crossing.

Unfortunately, with many roads and many of the audits we have conducted, there is no easy quick fix solution to many of the crash patterns. While the safety audit focuses on roadway features, enforcement is still a crucial component of safety on a road. Enforcement discourages

the motorist from becoming lax in obeying or observing the traffic regulations along the road. Just as resources must be allocated to the physical improvements of the road, they must also be allocated to enforcement to maintain the safe operation of the road.

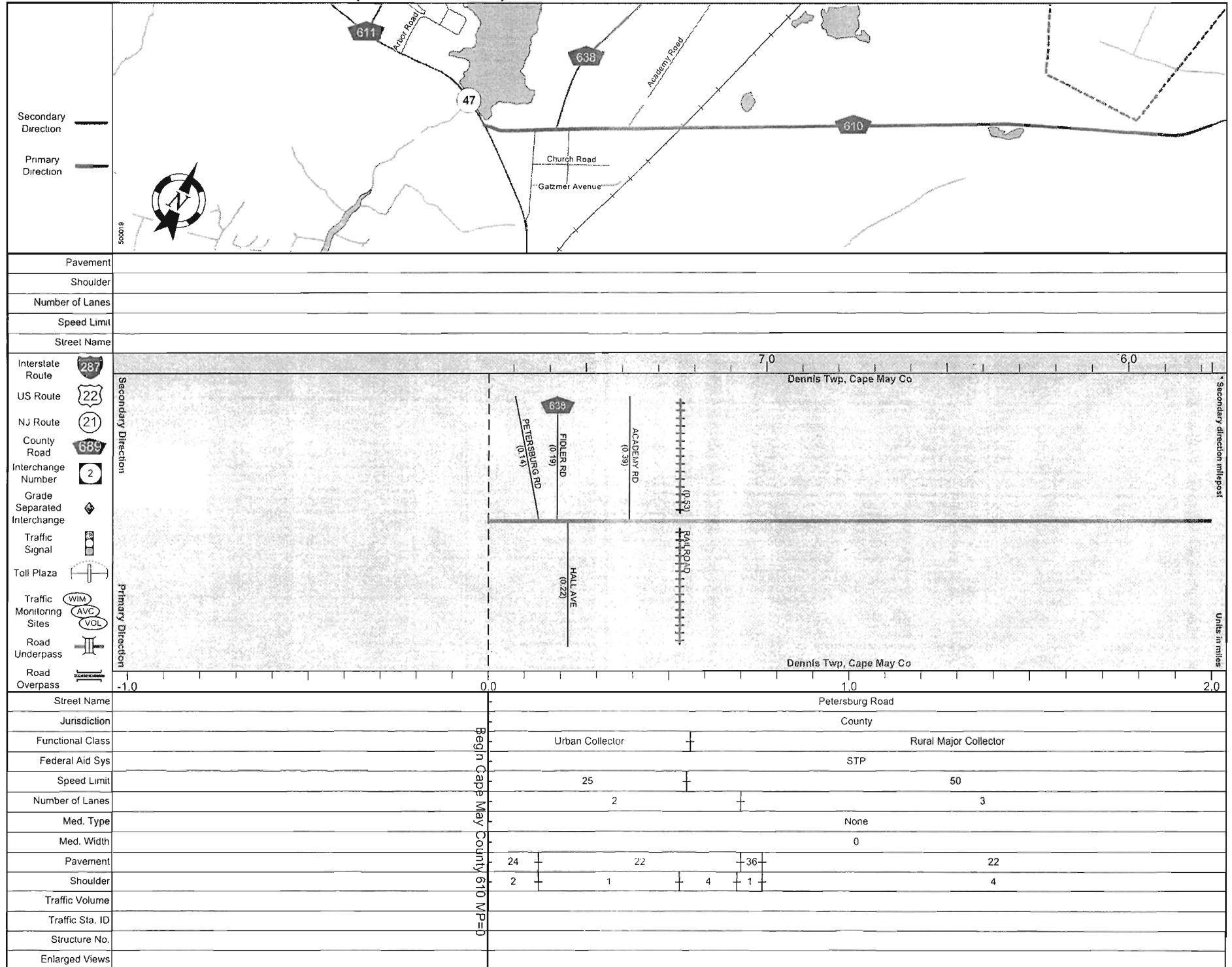
The opinions found in the findings of this Safety Audit report are those of the Safety Audit Team, as a whole, and not necessarily the opinions of the SJTPO or the individual team members.

Appendix

- Straight-line diagram of Dennisville-Petersburg Road (CR 610).
- Straight-line plan on which crashes are plotted.
- Crash Data Summary Sheets
- Crash Data Charts
- Photographs

CAPE MAY COUNTY 610 (South to North)

Mile Posts: 0.000 - 2.000

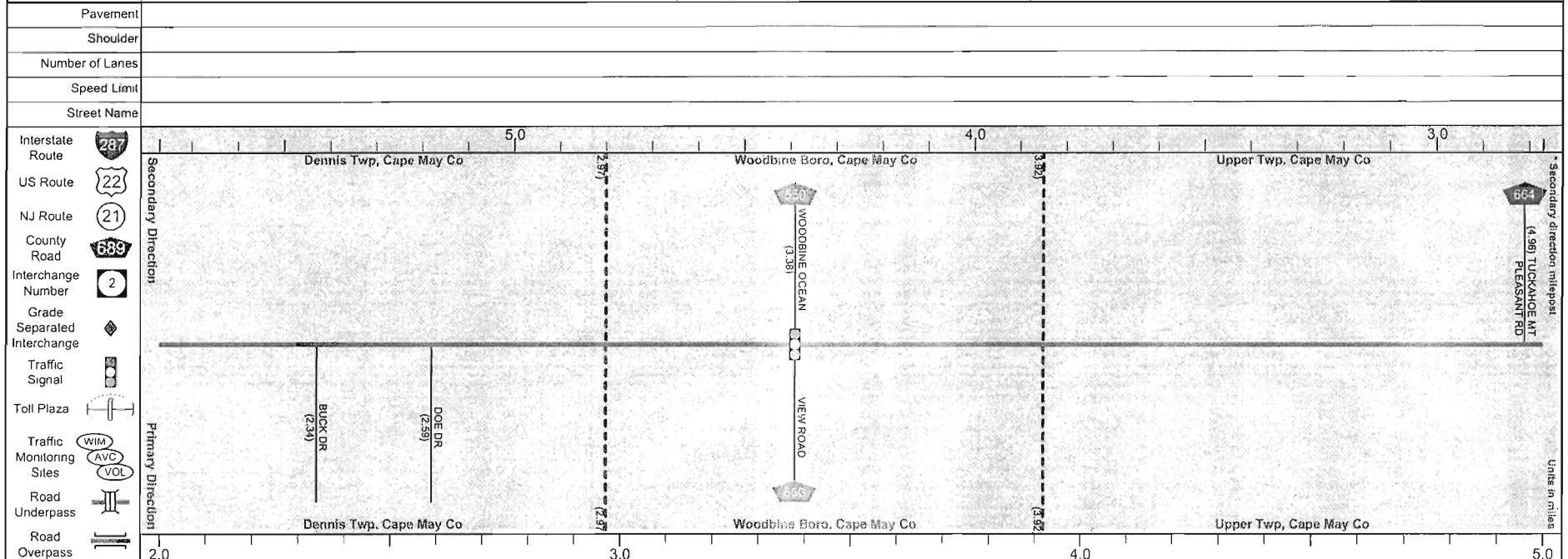
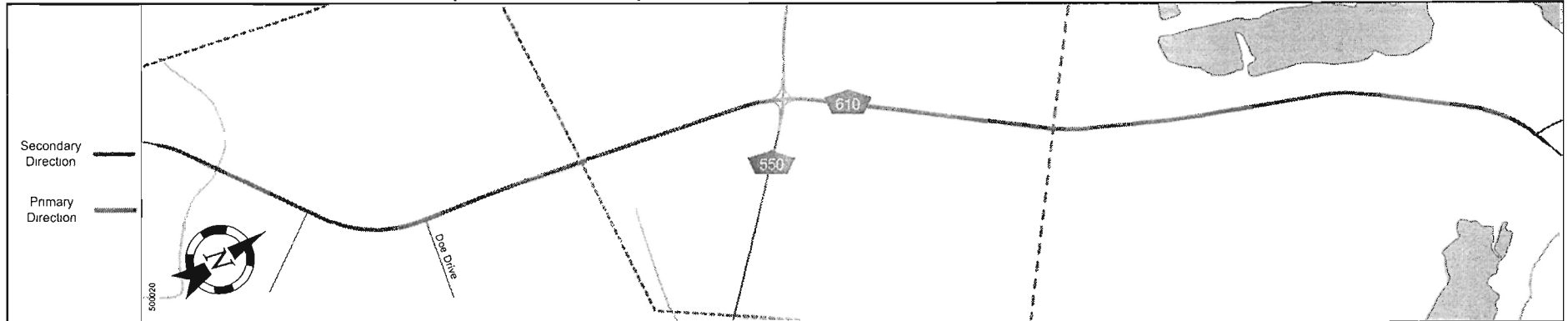


SRI = 05000610__

Date last inventoried: August 1999

CAPE MAY COUNTY 610 (South to North)

Mile Posts: 2.000 - 5.000



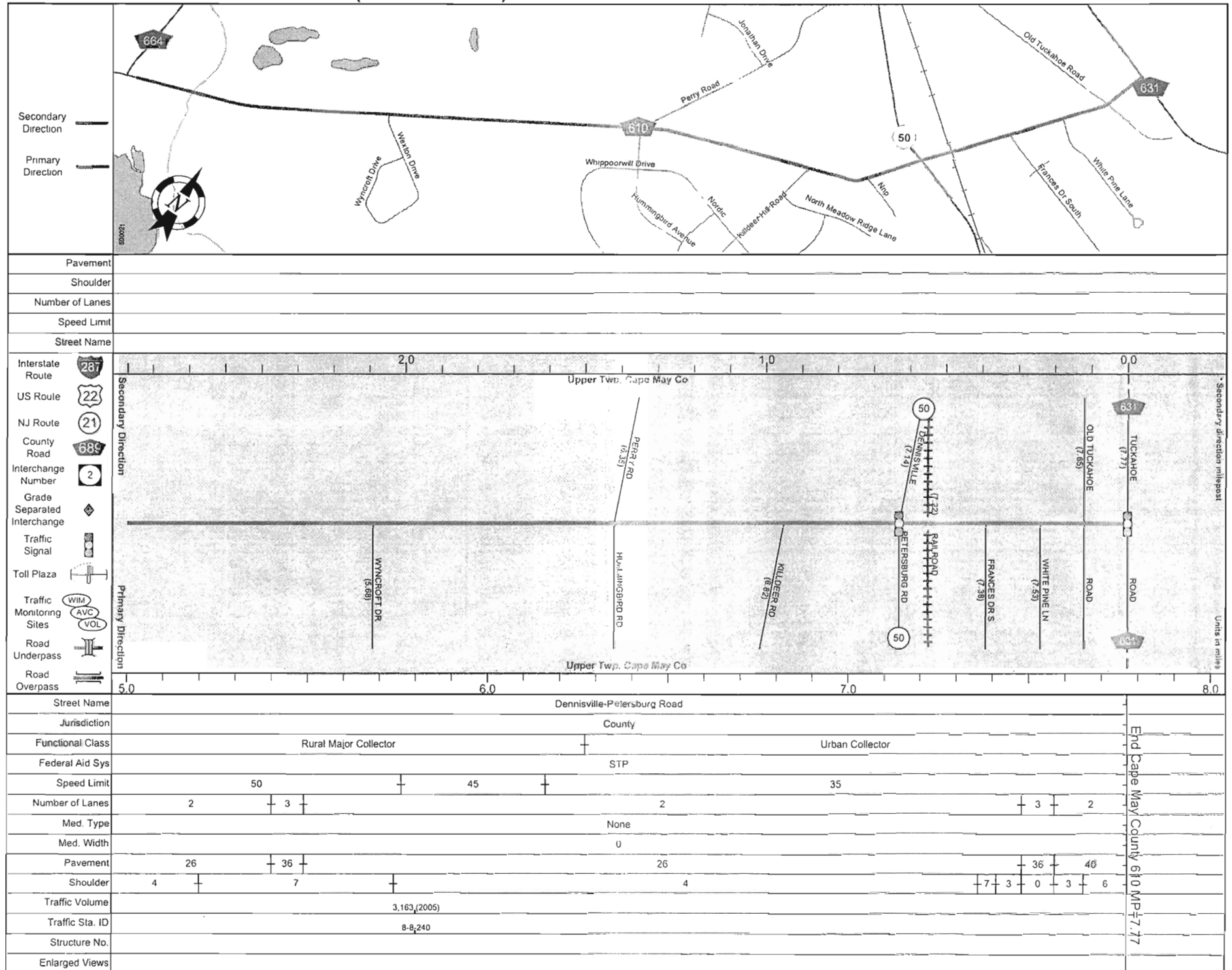
Street Name	Petersburg Road														Dennisville-Petersburg Road																		
Jurisdiction	County																																
Functional Class	Rural Major Collector																																
Federal Aid Sys	STP																																
Speed Limit	50																																
Number of Lanes	3														2	3	2	3	2														
Med. Type	None																																
Med. Width	0																																
Pavement	22														47	26												36	26	36	26	36	26
Shoulder	4	7	9	5	3	1	7	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1						
Traffic Volume	4,322 (2005)																																
Traffic Sta. ID	8-8;225																																
Structure No.																																	
Enlarged Views																																	

SRI = 05000610__

Date last inventoried: August 1999

CAPE MAY COUNTY 610 (South to North)

Mile Posts: 5.000 - 7.770



SRI = 05000610

Date last inventoried: August 1999

DENNISVILLE-PETERSBURG ROAD (CR 610)
DENNIS, UPPER TOWNSHIPS & WOODBINE BOROUGH
CRASH SUMMARY 2003-2005
TOTAL-33 CRASHES

Month

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>1</u>	<u>5</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>5</u>	<u>0</u>	<u>6</u>	<u>3</u>	<u>9</u>

Time of Day				Day of Week	
AM Midnight - Noon	Number of Crashes	PM Noon - Midnight	Number of Crashes		Number of Crashes
Midnight – 1:00	2	12:00-1300	2	Monday	4
1:00 – 2:00	3	1300-1400	1	Tuesday	5
2:00 – 3:00		1400-1500	2	Wednesday	3
3:00 – 4:00	1	1500-1600	1	Thursday	8
4:00 – 5:00	1	1600-1700	2	Friday	3
5:00 – 6:00		1700-1800		Saturday	5
6:00 – 7:00		1800-1900	1	Sunday	5
7:00 – 8:00	1	1900-2000			
8:00 – 9:00	1	2000-2100	1		
9:00 – 10:00	2	2100-2200	4		
10:00 – 11:00	2	2200-2300	5		
11:00 – 12 Noon		2300-2400	1		

DAY 14
NIGHT 19
UNKNOWN

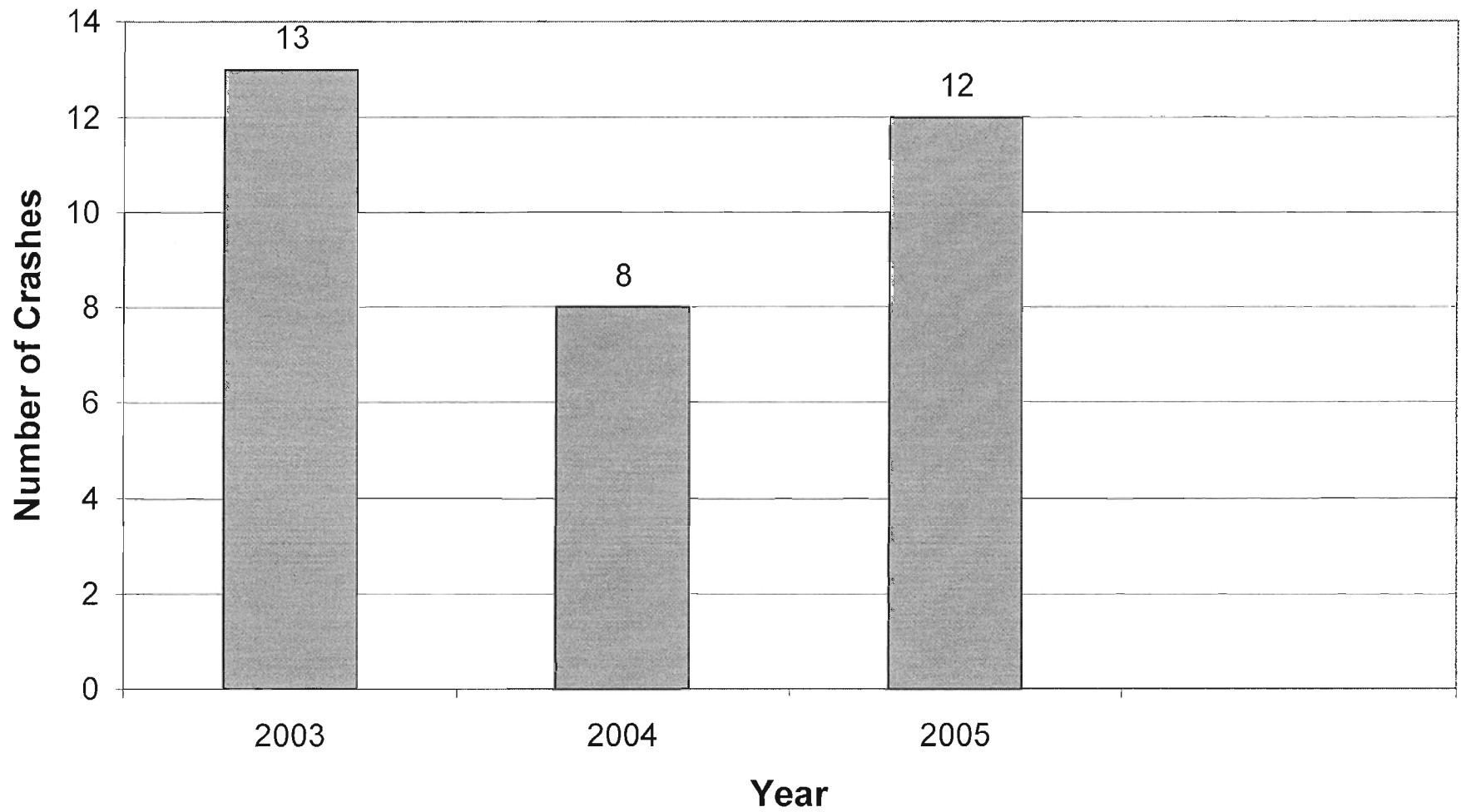
DRY 24 WET 3 SNOWY 4 ICY 2 OTHERS

CLEAR 27 RAIN 2 SNOW 4 FOG

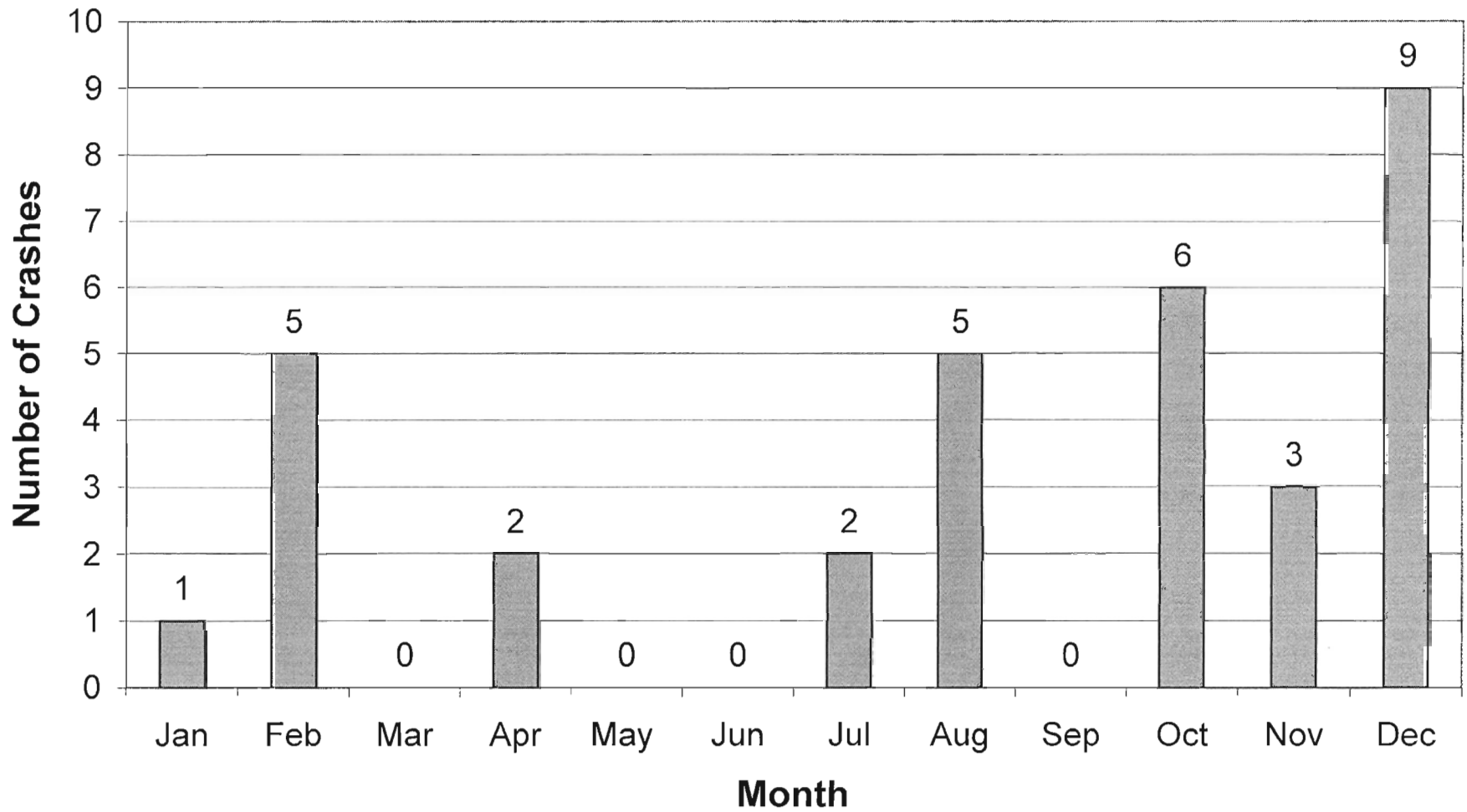
INJURY 9 NON-INJURY 24 FATAL 0

Right Angle	Same Direction	Left Turn	Right Turn	Side Swipe
Fixed Object <u>16</u>	Head On	<u>2</u> Other <u>5</u>	Struck Deer <u>10</u>	Bike

Dennisville-Petersburg Road (CR 610) 3 Year Trend

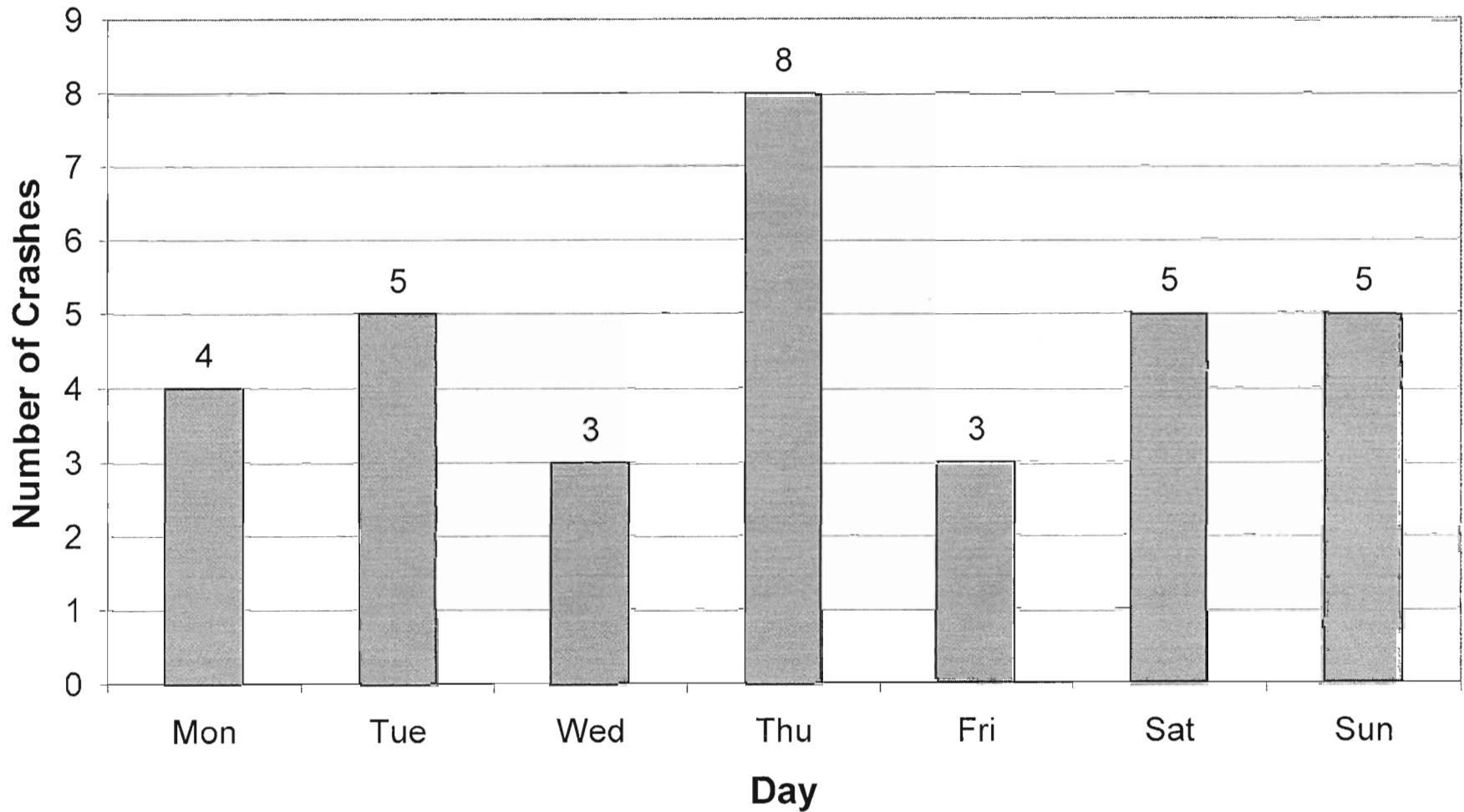


Dennisville-Petersburg Road (CR 610) Crash Occurrence by Month

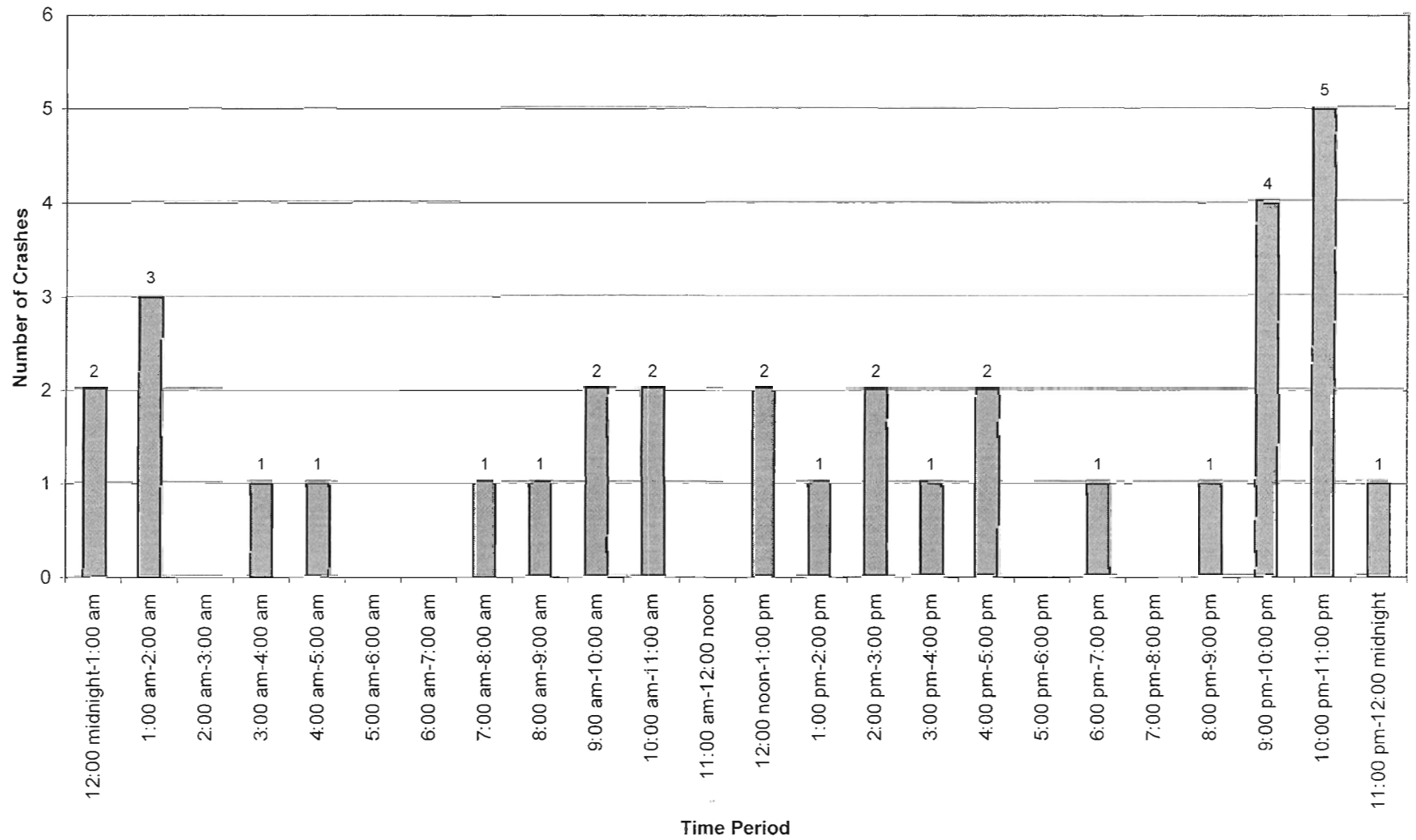


Dennisville-Petersburg Road (CR 610)

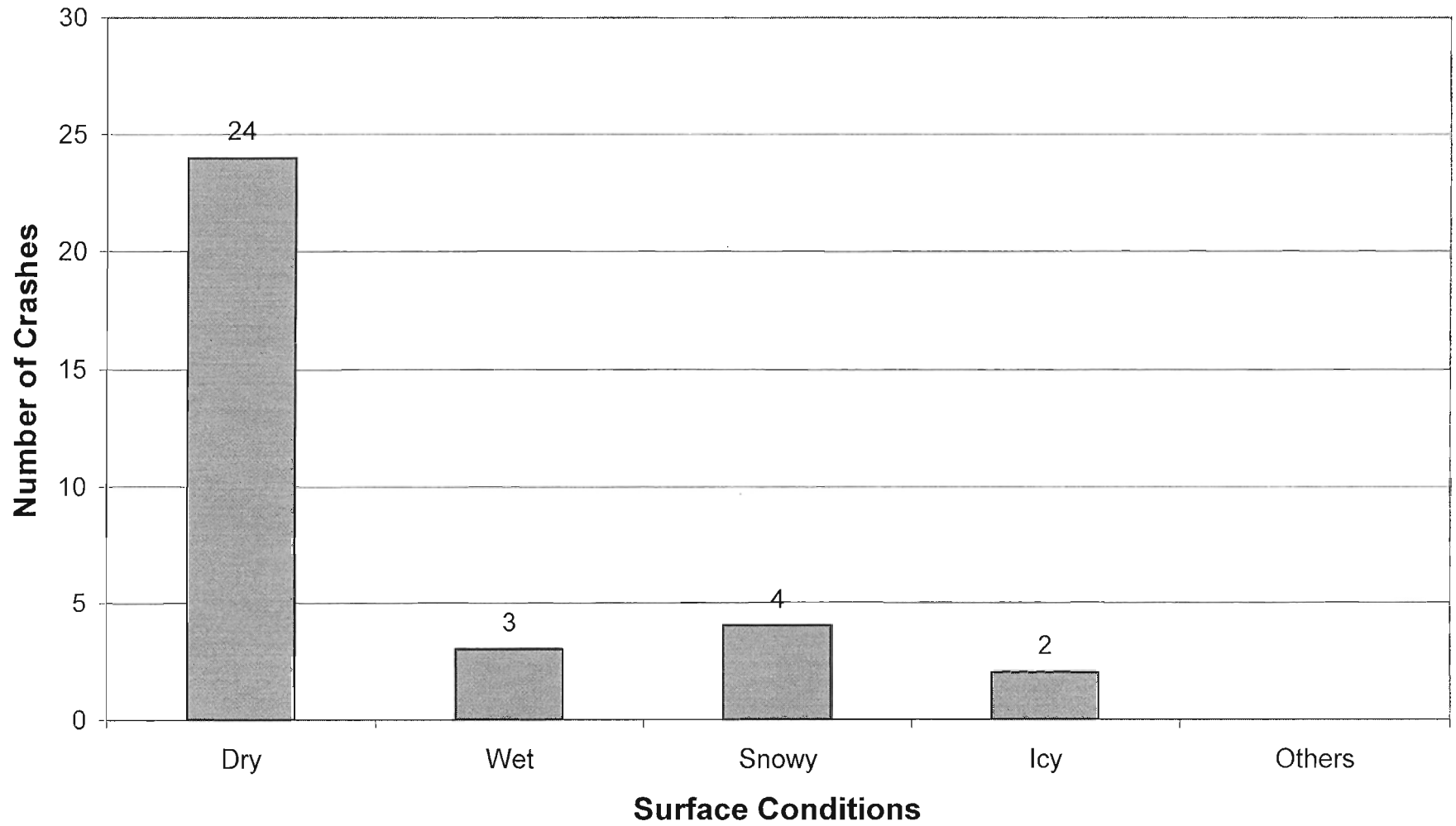
Crash Occurrence by Day of Week



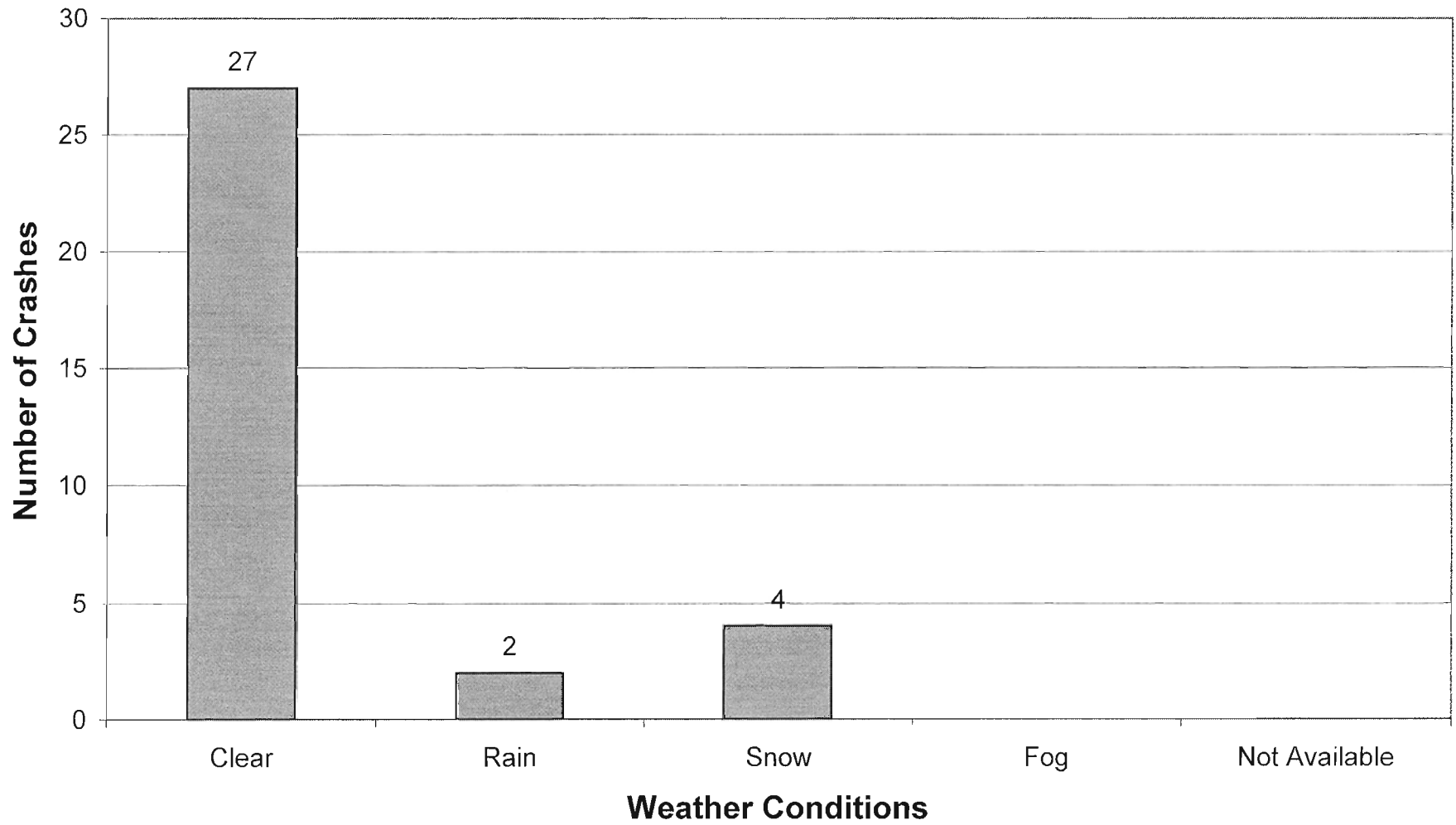
Dennisville-Petersburg Road (CR 610)
Crash Occurrence by Time of Day



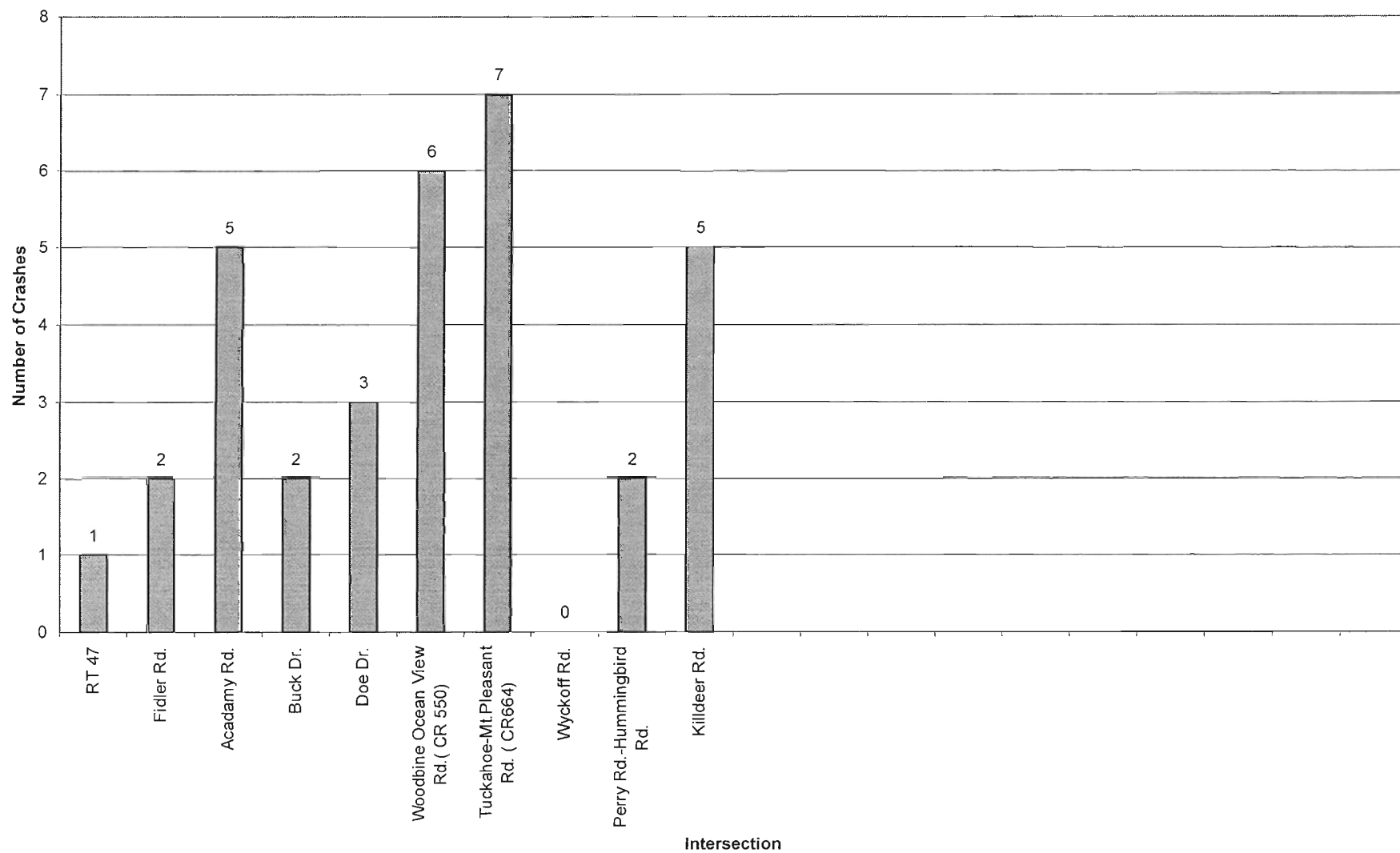
Dennisville-Petersburg Road (CR 610)
Crash Occurrence by Surface Conditions



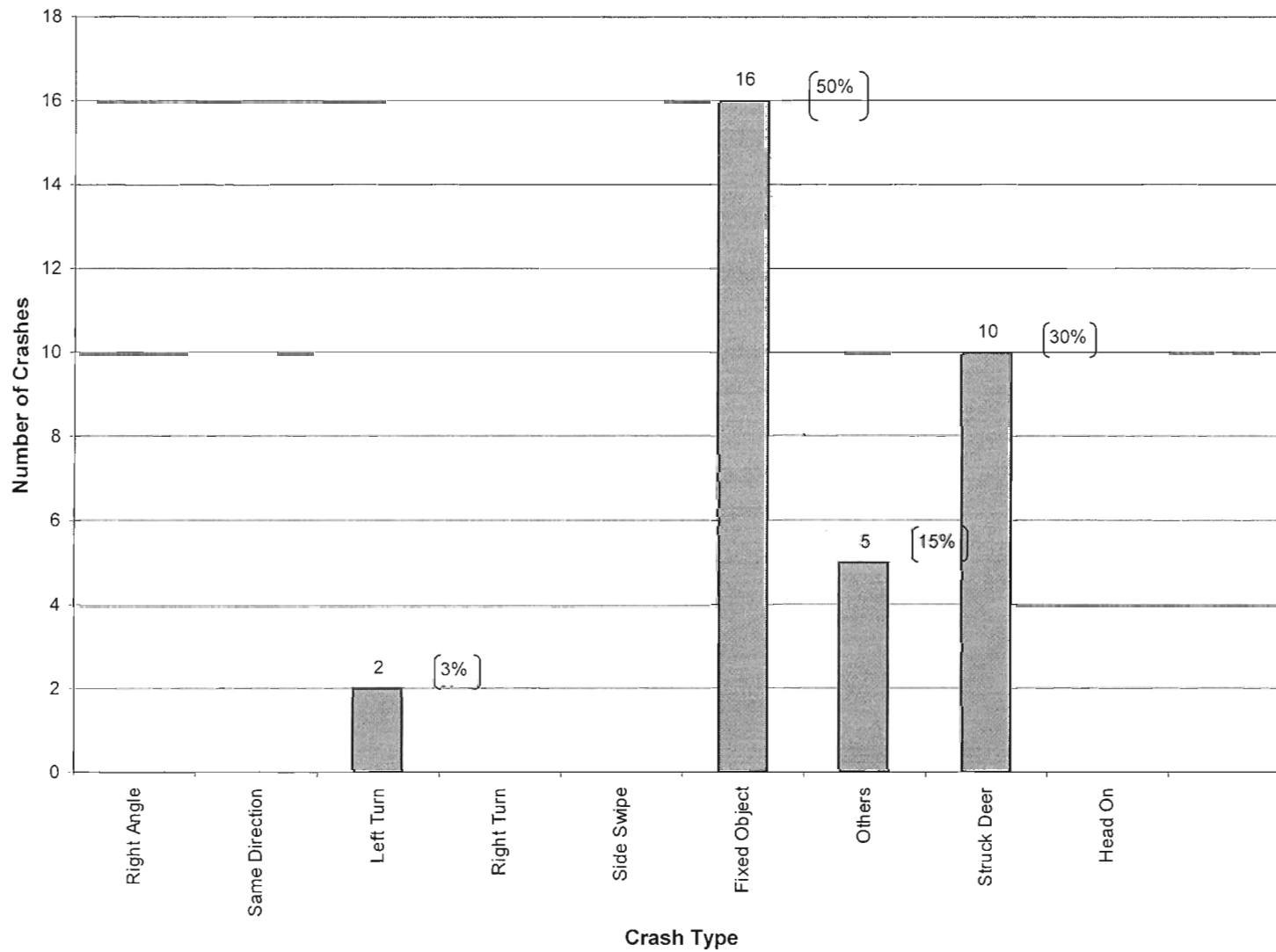
Dennisville-Petersburg Road (CR 610) Crash Occurrence by Weather Conditions



Dennisville-Petersburg Road (CR 610)
Spot Location of Crashes (Proximity to Nearest Intersection)



Dennisville-Petersburg Road (CR 610)
Crash Type



CR 610, Cape May County



3210029



3210030



3210031



3210032

CR 610, Cape May County



3210034



3210036



3210037



3210038

CR 610, Cape May County



3210039



3220040



3220041



3220042

CR 610, Cape May County



3220045



3220046



3220048