South Jersey Transportation Planning Organization

2006 Road Safety Audit

Main Road (CR 555)
Vineland City, Cumberland County

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DRAFT

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 2006 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.

Five roadway sections were chosen for the 2006 audits. Two of the roadways are located in Atlantic County, one is in Cumberland County, one in Cape May County, and one in Salem County. The five roadway sections are:

1. Main Road (CR 555) between Sherman Avenue (CR 552) and E. Chestnut Avenue (MP 13.70-16.05) in the City of Vineland, Cumberland County.

2. Tilton Road (CR 563) between Shore Road (CR 585) and the Black Horse Pike (US 40-322) (MP 3.70-6.27), in the Townships of Northfield and Egg Harbor, Atlantic County.

3. Jimmie Leeds Road (CR 561 & 633), between Pitney Road (CR 634) and Pomona Road (CR 575) (MP 1.54-4.49) and CR 633 (MP 0.64-1.68), in Galloway Township, Atlantic County.

4. Bayshore Road (CR 603) from Route US 9-Sandman Boulevard (a.k.a. Ferry Road) to Fishing Creek Road (CR 639) (MP 1.74-3.80) in Lower Township, Cape May County.

5. Broad Street (CR 607) between N. Virginia Avenue (US 130) and Maple Avenue (CR 634) (MP 0.00-1.93) in the Township of Carneys Point and the Borough of Penns Grove, Salem County.

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 2006 audit is to identify potential safety deficiencies along the selected sections of the five roadways.

There are three primary parts of the 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 and where improvements may be needed. Based on an analysis of all the data, the audit team

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

can conduct a productive and comprehensive evaluation of the roads being studied. The field **view** is conducted by a multi-disciplinary team. In this case, the team walked the entire length of the study area, 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

A meeting was held on October 11, 2005 at the SJTPO offices with representatives of all four counties, SJTPO and ORA to discuss the implementation of the 2005 safety audit findings and to gather information on the 2006 roadways to be audited. At that meeting, ORA sought to obtain background information on the selected 2006 sections of roadways from the counties by asking such questions as:

- 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 status?
- Have any of the traffic control devices or regulations been changed in the last three years (i.e., signals, speed limits, 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 along the road?
- What plans, if any, are available for the road?
- At what locations should new traffic counts, either turning movement or ATR's 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 Cumberland County had already participated in two previous road safety audits, and the City of Vineland in one audit, 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 line diagram plot showing the crash data for Main Road (CR 555), charts of two-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 the FY 2005 audit and all stakeholders received the information package, the workshop and field views were scheduled to take place on the same day.

MAIN ROAD (CR 555)

Main Road (CR 555) is under the jurisdictional control of Cumberland County. It is designated as a south-north road. The section being audited extends between Sherman Avenue (CR 552) on the southern end of the study area and Chestnut Avenue at the northern end of the study area. This section of road is classified as an urban minor arterial. The total length of the study area is 2.35 miles.

With the exception of left-turn lanes at the signalized intersections and the driveway to Main Land Villa, Main Road is marked as a two-lane road with shoulders.

There are three signalized intersections in the study area, one at the southern end of the study area at Sherman Avenue, at Magnolia Road and at the northern end at Chestnut Avenue. There is also an intersection control beacon at Grant Avenue.

Several roadway improvements and modifications are planned along the study area.

- The signal installation at Sherman Avenue is to be modernized, including the incorporation of a left turn interval for northbound traffic.
- The Elmer Road approaches to CR 555, which are currently offset forming two 'T'-type intersections, will be aligned to form a full cross-type intersection. Once this realignment takes place, the intersection may be signalized.
- Plans are being finalized for the construction of a three-lane cross-section between Chestnut Avenue and Walnut Road.
- The county is also investigating the conversion of the flashing signal at Grant Avenue to a "stop and go" signal.

The curb line development is mostly residential with some business. There are no significant traffic generators along the road. No major planned future development along the road was mentioned during the audit.

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. **Aerial Photos**

   Aerial photographs of the study section, scaled at approximately 1"=300', were printed and used as reference at the audit meeting.

2. **Straight Line Plan**

   Straight line plans, 1"=200', were developed of the study section of the road. The crash data was shown on these plans for use at the audit and for the final report.

3. **Traffic Volume Data**

   Traffic counts were requested and conducted at three intersections along the roadway. The intersections counted were Grant Ave, Elmer Ave and Magnolia Avenue.

4. **Traffic Signal**

   The County submitted traffic signal plans and timings for the intersections of Sherman Avenue, Chestnut Avenue, and Magnolia Road. It was ascertained from pre-audit discussions that the traffic signal installation at the Sherman Avenue intersection is to be modernized to include a left turn interval for northbound traffic. The plans of the other intersections were reviewed and found to be in general conformance with the current edition of the MUTCD. The signalized locations are discussed in detail in the findings of the report.

5. Crash Data

SJTPO staff forwarded to ORA the crash reports from the City of Vineland Police Department for the years 2003 and 2004. For the two-year period, a total of 141 crashes were plotted for the study section of road. Fifty-six (56) crashes occurred in 2003 and 85 in 2004.

The type of crashes are characterized as follows:

0 – fatal crashes

34 – injury crashes

107 – non-injury crashes

31 – right-angle type crashes – Four at Sherman Avenue, three at Grant Avenue, three at the driveway to the Sunoco Gas Station, four at the driveway to the CVS, and three at Chestnut Avenue. There were no other concentrations.

88 – same-direction type crashes – Twenty-five at Sherman Avenue, four at Grant Avenue, 14 at Magnolia Road, seven at Walnut Road and 22 at Chestnut Avenue. There were no other concentrations.

9 – left-turn type crashes – No concentration.

5 – fixed-object type crashes – No concentration.

2 – struck animal – No concentration.

2 – other type crashes – No concentration.

A review of the information on the individual crash reports revealed the following information. Where possible, the data was compared to statewide averages for county roads. Potential reasons for the differences are also noted for some of the crash summary information.

- The month with the highest number of crashes was April (21). The month with the least number of crashes was December (3).
- The highest frequency of crashes occurred on Friday. The least number of crashes occurred on Sunday.
- The highest frequency of crashes occurred from 2:00-5:00 PM.
- The percentage of crashes during hours of darkness (11%) is less than half the statewide average for county roads (approximately 30%). (The entire roadway is illuminated with highway lighting.)
- The percentage of crashes for wet surface conditions (40%) is greater than the statewide average for county roads (approximately 24%). (The pavement surface appears worn and polished in some areas.)
- The percentage of crashes with snowy or icy surface conditions (1%) is less than the statewide average for county roads (approximately 5%). (Less conditions of this type in the southern part of the state.)
- The percentage of crashes with injuries (24%) is consistent with the statewide average for county roads (approximately 30%).
- The percentage of right-angle type crashes (23%) is consistent with the statewide average for county roads (approximately 21%).
- The percentage of same direction crashes (63%) is over twice the statewide average for county roads (approximately 29%). (Single lane roadway with intersections and numerous driveways.)
- The percentage of left-turn crashes (6%) is consistent with the statewide average for county roads (approximately 6%).
- The percentage of side-swipe type crashes (0%) is less than the statewide average for county roads (approximately 12%). (Possibly due to the single lane conditions.)
- The percentage of fixed-object type crashes (3 %) is much less than the statewide average for county roads (approximately 12%). (Most fixed objects away from the pavement.)

- The percentage of struck animal type crashes (1%) is less than the statewide average for county roads (approximately 4%). (urbanized area)
- The percentage of other type crashes (1%) is less than the statewide average for county roads (approximately 4%).

6. 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 4, 2006, the Safety Audit Team met in the SJTPO office at 782 South Brewster Road, Vineland to formally conduct the audit. The meeting commenced at 9:00 AM with brief statements by Tim Chelius and 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 Main Road and Chestnut Avenue intersection to begin the audit. The City of Vineland provided two vans for the team. Team members are listed below.

SAFETY AUDIT TEAM FOR HOOK ROAD

Name	Agency
Brian Myers	City of Vineland
Daniel Cabral	City of Vineland
Karl Gleissner	Cumberland County
Ron Groshardt	Cumberland County
Tina Deng	NJDOT
Noel Barboso	NJDOT
Wayne Mathis	NJDOT
Ray Reeves	NJDHTS
Norman Deitch	Orth-Rodgers & Associates, Inc.
Bill Schiavi	SJTPO
George Strathern	Orth-Rodgers & Associates, Inc.

The team began at the Chestnut Avenue intersection and walked south to Sherman Avenue.

During the walk, team members identified features on the roadway and its surrounding environment that could contribute to the occurrence or relative severity of roadway crashes. At each intersection and mid-block location, the Audit Team identified safety deficiencies and inappropriate traffic signs, as well as other items that are not consistent 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.

Norm Deitch and George Strathern conducted a night audit on May 8, 2006. 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. They also looked for issues that would only be apparent during hours of darkness, such as clearly defined roadway alignment, signal indication visibility conflicts, ineffective street lighting, etc.

The next section of the report summarizes the findings from the daytime and nighttime audits of CR 555 between Sherman Avenue and Chestnut Avenue in the City of Vineland.

Findings

The findings from the Main Road (CR 555) safety audit are presented on the following pages in the approximate order of their location along the roadway beginning at Chestnut Avenue and traveling south to Sherman Avenue (CR 552).

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
1	General comment - Sign installations. 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 (breakaway) and the MUTCD (height and lateral clearance).		X			X	
2	"NO LEFT TURN" sign at the westerly most driveway to CVS facing westbound Chestnut Avenue traffic does not appear to be reflectorized.	Replace with new sign.	X			X		
3	Chestnut Avenue intersection – southwest corner of the intersection has been cut back. Crosswalks across the Chestnut Avenue westerly approach and the Main Road southerly approach do not extend to the curb line on that corner.	Re-install crosswalks so they intersect appropriately with the southwest corner of the intersection.	X			X		
4	Chestnut Avenue intersection – four-section, pole-mounted indications on the northwest corner of the intersection and the southeast corner of the intersection are missing visors on all four sections.	Re-install visors on both signal heads, attempt to re-position (rotate) heads so that they are less susceptible to being struck by trucks turning right at the intersection.	X			X		
5	Chestnut Avenue intersection – northwest corner lacks depressed curb to accommodate pedestrians in the crosswalk across the Chestnut Avenue westerly approach.	Install depressed curb on the northwest corner of the intersection to accommodate pedestrians using the westerly crosswalk.		X		X		
6	Chestnut Avenue intersection – school crossing warning signs at the intersection along all of the approaches are not the current type recommended by the MUTCD.	Replace signs with those that comply with the current MUTCD.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
7	Chestnut Avenue intersection – school advance warning signs on both of the Chestnut Avenue approaches and on the Main Road southerly approach to the intersection are not the current type recommended by the MUTCD.	Replace signs with those that comply with the current MUTCD. Sign along Main Road northerly approach needs "AHEAD" plate.	X			X		
8	Chestnut Avenue intersection – pedestrian signal on the northwest corner of the intersection facing the southwest corner of the intersection is not visible from the southwest corner.	Re-aim signal head so that it is visible to pedestrians on the southwest corner of the intersection.	X			X		
9	Chestnut Avenue intersection – there were three right-angle type crashes involving vehicles exiting the Sunoco gas station driveway onto Main Road.	Consideration should be given to prohibiting the left turn from the gas station driveway onto Main Road.	X				X	
10	Chestnut Avenue intersection – some of the push buttons on the signal poles at the intersection appear to be located so that pedestrians have to be on the street side of the pole to utilize the button.	Evaluate the location of all of the pedestrian push buttons at the intersection and relocate those that require the pedestrians to be on the street side of the pole to use.	X				X	
11	Southbound side – south of Chestnut Avenue "SPEED LIMIT 45 MPH" sign and post are leaning against a tree.	Re-install sign and post.	X			X		
12	Northbound side – south of Chestnut Avenue "LEFT LANE MUST TURN LEFT" sign is worn and unnecessary as there are other lane use control signs existing along the approach.	Remove sign and post.	X			X		
13	Washington Avenue – Stop sign is worn and installed too low.	Install new sign at appropriate height.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
14	Southbound side -- at driveway to Main Land Villa – painted left-turn lane with minimal transition, no lane use control signs, no painted arrows or "onlys." Utility pole #VE1729S located just off roadway at narrow point of travel lane formed by transition. Local team members state that southbound left-turn lane is very light. Southbound traffic observed disregarding left-turn lane pavement markings.	Object marker be installed in front of pole #VE1729S. Consideration should be given to removing left-turn slot; if retained, provide appropriate transitions, markings and signing.		X			X	
15	Driveway to Main Land Villa – finger island on driveway lacks keep right sign.	Install "KEEP RIGHT" sign on end of finger island.	X			X		
16	Driveway to Main Land Villa has no control at the intersection and has the appearance of a street rather than a driveway.	Contact home owners association regarding the installation of a "STOP" along the driveway.	X			X		
17	Walnut Road westbound approach - "STOP" sign worn and installed too low.	Replace sign and post.	X			X		
18	Walnut Road eastbound approach northwest corner – pieces of pipe installed along the edge of the radii. Appears to be homeowner's attempt to keep motorist from shortcutting the corner.	Contact property owner regarding the removal of these obstacles.	X			X		
19	Southbound side – Walnut Road is not well defined.	Install modified crossroad symbol sign with supplemental name plate to warn and identify intersection to motorists.	X			X		
20	Walnut Road eastbound approach – path worn by right-turning vehicle across southwest corner.	Consideration should be given to installing curb on the southwest corner to discourage motorists from leaving the pavement.		X			X	
21	Walnut Road southwest corner – utility pole right on radius of southwest corner.	Install delineators or object markers in front of pole.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
22	Northbound side just south of Walnut Road – black on white sign "PUBLIC WORKS STREET AND ROAD DIVISION NEXT LEFT" with horizontal arrow to left. Sign is too small and "NEXT LEFT" should be removed from legend.	Remove existing sign. If deemed necessary to have sign, design appropriately sized sign. Sign should be white letters on green background.	X			X		
23	Southbound side opposite Harding Road – mailbox mounted on 4-inch pipe.	Contact property owner regarding mounting mailbox in conformance with post office standards.	X			X		
24	Southbound side north of Magnolia Road -"SIGNAL AHEAD" sign with educational plate below it worn.	Replace "SIGNAL AHEAD" sign and remove educational plate. Consider installing new sign several hundred feet north of it's present location.	X			X		
25	Driveway to Main Road Commons (#1318) – "STOP" sign on driveway is worn.	Contact property owner regarding the installation of new sign.	X			X		
26	Southbound side north of Magnolia Road in front of #1348 - utility pole approximately one foot behind curb. Road narrows at that point.	Install object marked in front of utility pole facing southbound traffic.	X			X		
27	Magnolia Road intersection-crosswalks painted across all four approaches to the intersection. However, there are only handicapped ramps on the southeast corner of the intersection.	Consideration should be given to installing handicapped ramps on the other three corners of the intersection.		X		X		
28	Magnolia Road – "WALK/ DON'T WALK" signal on the northwest corner of the intersection facing the southwest corner of the intersection – bulb burned out.	Replace bulb.	X			X		
29	Magnolia Road intersection – standing water on southwest corner of intersection. Only one inlet at the intersection on the northwest corner.	Drainage at the intersection should be evaluated.		X			X	

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
30	Magnolia Road - the county requested that a traffic count be conducted at the intersection. On May 3, 2006, A-Tech conducted an 8-hour traffic count at the intersection. The count was conducted between 7AM-9 AM and 12 noon to 7 PM. The volume of traffic on the Magnolia Road approaches was light requiring no revisions to the signal phasing.	No action required.						
31	Southbound side south of driveway to Village Square strip mall (#1408) - two empty signposts.	Remove sign posts.	X			X		
32	Southbound side just north of Elmer Road -"SPEED LIMIT 45 MPH" sign damaged.	Replace sign.	X			X		
33	Elmer Road westbound approach - "STOP" sign installed too low.	Re-install sign at appropriate height.	X			X		
34	Elmer Road northwest corner – shrubs and bushes appear to be within sight triangle, limiting corner sightlines.	Trim or remove.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
35	Elmer Road – as stated in the body of the report, the Elmer Road approaches, which are currently offset from each other forming two 'T'-type intersections, will be aligned to form a full-cross type intersection at some point in the future. Once this realignment takes place, the intersection may be signalized. The County requested that a traffic count be conducted at the intersection. On March 15, 2006, A-TECH performed an 8-hour traffic count at the intersection. The count was conducted between7AM-9AM and 12 noon to 7 PM to include both the AM and PM peak hour at the intersection. A review of that count indicates that the intersection meets Warrant 1, Condition B of the current MUTCD for signalization. Meeting a warrant alone is not a reason to install a traffic signal and the intersection should be evaluated in more detail before a decision on whether to signalize it is made.	If the County believes that a traffic signal may be needed at the intersection when the intersection is re-constructed, they should conduct a formal investigation and warrant analysis of the intersection.			X			X
36	Southbound side – mailbox in front of #1720 installed on concrete filled iron post.	Contact property owner regarding mounting mailbox in conformance with post office standards.	X			X		
37	Southbound side – approximately 20' south of the mailbox mentioned in the previous item, there is another concrete filled post.	Contact property owner regarding the removal of this post.	X			X		
38	Southside in front of #1846 – concrete filled pipe on both sides of driveway.	Contact property owner regarding the removal of these pipes.	X			X		
39	Roosevelt Boulevard – 'T'-type intersection. Team member recommended large, double arrow sign be installed at top of 'T'.	Install large, double arrow sign at top of 'T'.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
40	Garry Avenue - "STOP" sign installed too low and appears to be non-reflectorized.	Install new sign at appropriate height. Consideration should be given to installing large, double arrow sign on top of 'T'.	X			X		
41	Rodgers Avenue – sightlines across the southeast corner of the intersection are restricted by trees.	Consideration should be given to the removal of the trees.		X			X	
42	Rodgers Avenue southeast corner – standing water on corner.	Drainage at the intersection should be evaluated.		X			X	
43	Grant Avenue -- The county requested that a traffic count be conducted at the intersection as they are considering converting the existing flashing signal to a "stop and go" signal. On March 15, 2006, A- TECH performed an 8-hour traffic count at the intersection. The count was conducted between 7AM-9AM and 12 noon to 7 PM to include both the AM and PM peak hour at the intersection. A review of that count indicates that the intersection meets Warrant 1, Condition B of the current MUTCD for signalization. Meeting a warrant alone is not a reason to install a traffic signal and the intersection should be evaluated in more detail before a decision on whether to signalize it is made.	If the County believes that a traffic signal may be needed at the intersection, they should conduct a formal investigation of the intersection.		X				X
44	Grant Avenue – vehicles parked in the parking lot on the northeast corner and in an unpaved area on the southwest corner of the intersection could obstruct corner sight distance at the intersection.	Consideration should be given to reviewing the permits for these two properties to see if parking practices are approved.		X			X	

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
45	Grant Avenue – existing bus stop on the southeast and southwest corners of the intersection - No provisions for pedestrians crossing between the two bus stops.	Install a crosswalk across Main Road between the southeast and southwest corners. Install supplemental pedestrian crossing and advance pedestrian crossing warning signs per the current MUTCD.	X			X		
46	Southbound side south of Grant Avenue - "SPEED LIMIT 40 MPH" sign is worn.	Replace with new sign.	X			X		
47	Alexander Avenue - "STOP" sign is worn and installed too low.	Replace with new sign installed at appropriate height.	X			X		
48	Alexander Avenue – sight distance across the southeast corner restricted by a line of trees, utility poles and mailboxes. A large tree restricts corner sight distance across the northeast corner.	Long-term solution is the removal of trees and the relocation of utility poles.			X		X	
49	Southbound side in front of #2428 – concrete posts on both sides of driveway.	Contact property owner regarding the removal of posts.	X			X		
50	At Mile Post 14 - southbound milepost 14 marker is damaged and northbound marker is missing.	Replace southbound marker, install sign and post for northbound marker.	X			X		
51	Southbound side north of Sherman Avenue - "JCT 555" sign assembly worn.	Replace sign assembly.	X			X		
52	Local team member stated that the firehouse along Main Road north of Sherman Avenue is no longer used.	Remove firehouse warning signs and posts along both Main Road approaches to the firehouse.	X			X		
53	Southbound side – lane use control signs for Sherman Avenue are worn.	Replace signs.	X			X		
54	Westbound on Sherman – easterly most driveway to WAWA is in close proximity to the intersection.	Consideration should be given to prohibiting the left turn into this driveway.	X			X		

	SAFETY ISSUE	REMEDIAL ACTION	LEVEL OF EFFORT REQUIRED			POTENTIAL SAFETY BENEFIT		
			LOW	MEDIUM	HIGH	LOW	MEDIUM	HIGH
	NIGHTIME FIELD VIEW IDENTIFIED THE FOLLOWING SAFETY ISSUES – 5-16-06							
	General comments – Highway almost continually lit; pavement markings, although not measured, appear to be 6 inches wide; street name signs with 6-inch legends are easily readable.							
55	Chestnut Street intersection – side glow from pole mounted signal missing visors described in items #4 above are much more prominent at night.	Re-mount signal head and install missing visors.	X				X	
56	Southbound side north of Elmer Road - "SPEED LIMIT 40 MPH" sign is worn.	Replace with new sign.	X			X		
57	Northbound approaching Sherman Avenue – centerline completely worn between the WAWA driveway and the intersection.	Re-install centerline marking.	X			X		

Recommendations

As stated previously, the intent of the road safety audit process is to conduct a multi-disciplinary formal examination of highway features and the surrounding environment that increase the potential for crashes and their severity 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.

While every crash that can be eliminated is beneficial, unfortunately the audit did not reveal any clear-cut quick fixes that would greatly reduce the crash experience along this section of roadway. The three highest locations for crashes are signalized (Chestnut Avenue, Walnut Avenue and Sherman Avenue), and the Sherman Avenue intersection is already scheduled to be upgraded. The findings of the report with the greatest potential for reducing the crash experience may be found in the crash analysis which revealed an over representation of wet weather crashes. If a "slippery when wet" condition does exist, it could be contributing to the over representation of same-directional type crashes along the road. Note: Mr. Chelius has already contacted state officials regarding their conduct of a skid test survey along the road.

Once the results are received, milling and resurfacing the areas most subject to being slippery may be the most beneficial finding of the audit.

As with all traffic safety studies, some of the crash experience on the roadway has no obvious or practical solutions.

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

- Map of Main Road
- Straight-line plan with crash data plotted on it.
- Crash Data Summary Sheet
- Traffic Counts
- Crash Data Charts
- Photographs
- Checklists

MAIN ROAD (CR 555)
VINELAND
CRASH SUMMARY 2003-2004
TOTAL-141 CRASHES
Month

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	9	14	21	19	13	12	13	8	15	4	3

Time of Day

AM Midnight - Noon	Number of Crashes	PM Noon - Midnight	Number of Crashes
Midnight – 1:00		12:00-1300	11
1:00 – 2:00		1300-1400	7
2:00 – 3:00		1400-1500	14
3:00 – 4:00		1500-1600	18
4:00 – 5:00	1	1600-1700	16
5:00 – 6:00		1700-1800	11
6:00 – 7:00		1800-1900	7
7:00 – 8:00	5	1900-2000	2
8:00 – 9:00	9	2000-2100	4
9:00 – 10:00	4	2100-2200	4
10:00 – 11:00	6	2200-2300	3
11:00 – 12 Noon	12	2300-2400	2
		Unknown	5

Day of Week

	Number of Crashes
Monday	16
Tuesday	24
Wednesday	24
Thursday	18
Friday	25
Saturday	23
Sunday	10
Unknown	1

DAY 125
NIGHT 16

DRY 82 WET 56 SNOWY 2 ICY 1 OTHERS 0

CLEAR 91 RAIN 49 SNOW 2 FOG 0

INJURY 34 NON-INJURY 107 FATAL 0

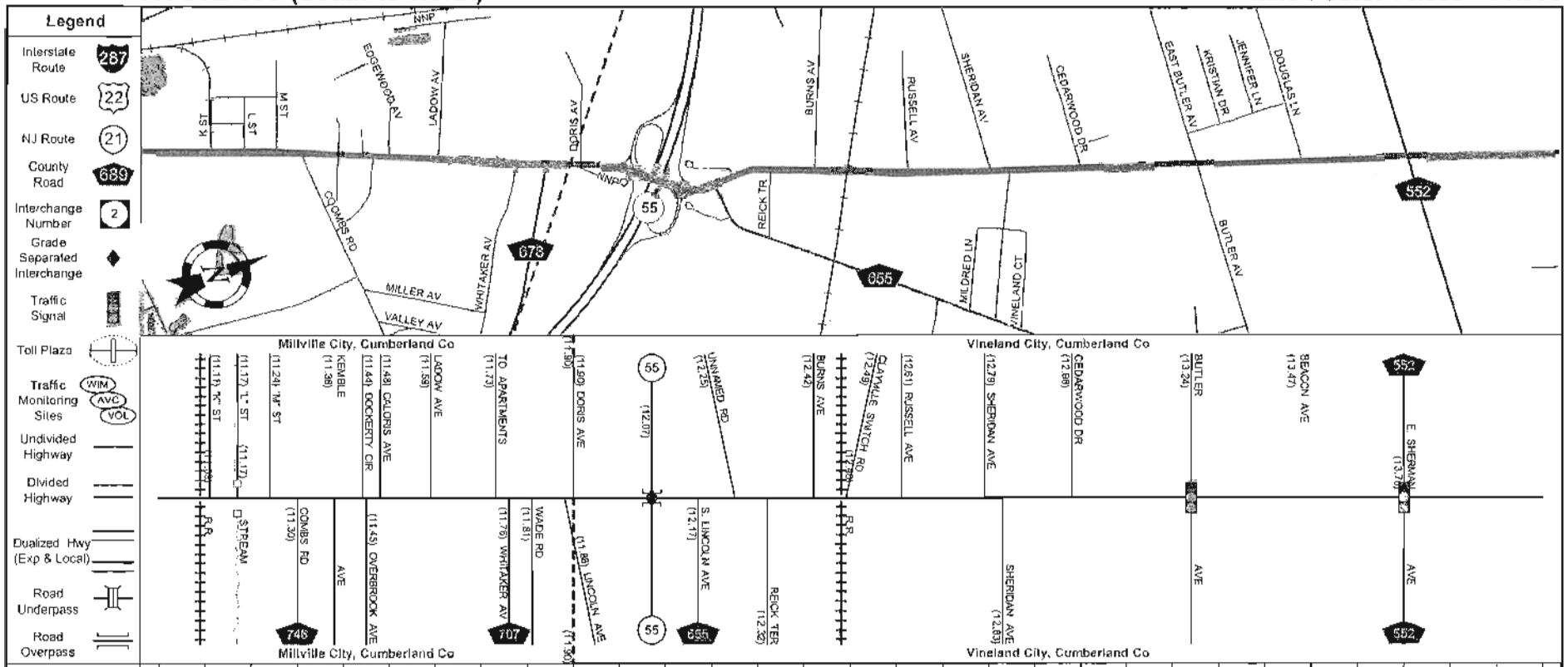
Right Angle	Same Direction	Left Turn	Right Turn	Side Swipe
31	88	9	4	

Fixed Object	Struck Animal	Other	Pedestrian	Bike
5		2		

Parking Related _____

ROUTE 555 (South to North)

Mile Posts: 11.000 - 14.000



Street Name	Wheaton Avenue	South Main Road
Jurisdiction	County	
Functional Class	Urban Minor Arterial	
Federal Aid Sys	STP	
Control Section		
Speed Limit	45	40
Number of Lanes	2	
Divided SB/WB Shou.	8	3
Divided SB/WB Pave.		
Divided Med. Type	None	
Divided Med. Width	0	
Undiv. NB/EB Pave.	24	
Undiv. NB/EB Shou.	8	6
Traffic Volume	12,969 (04)	11,792 (04)
Traffic Sta. ID	6-5-133	6-7-044
Structure No.	NA	0609161
Contract No. & Date		
Enlarged Views		

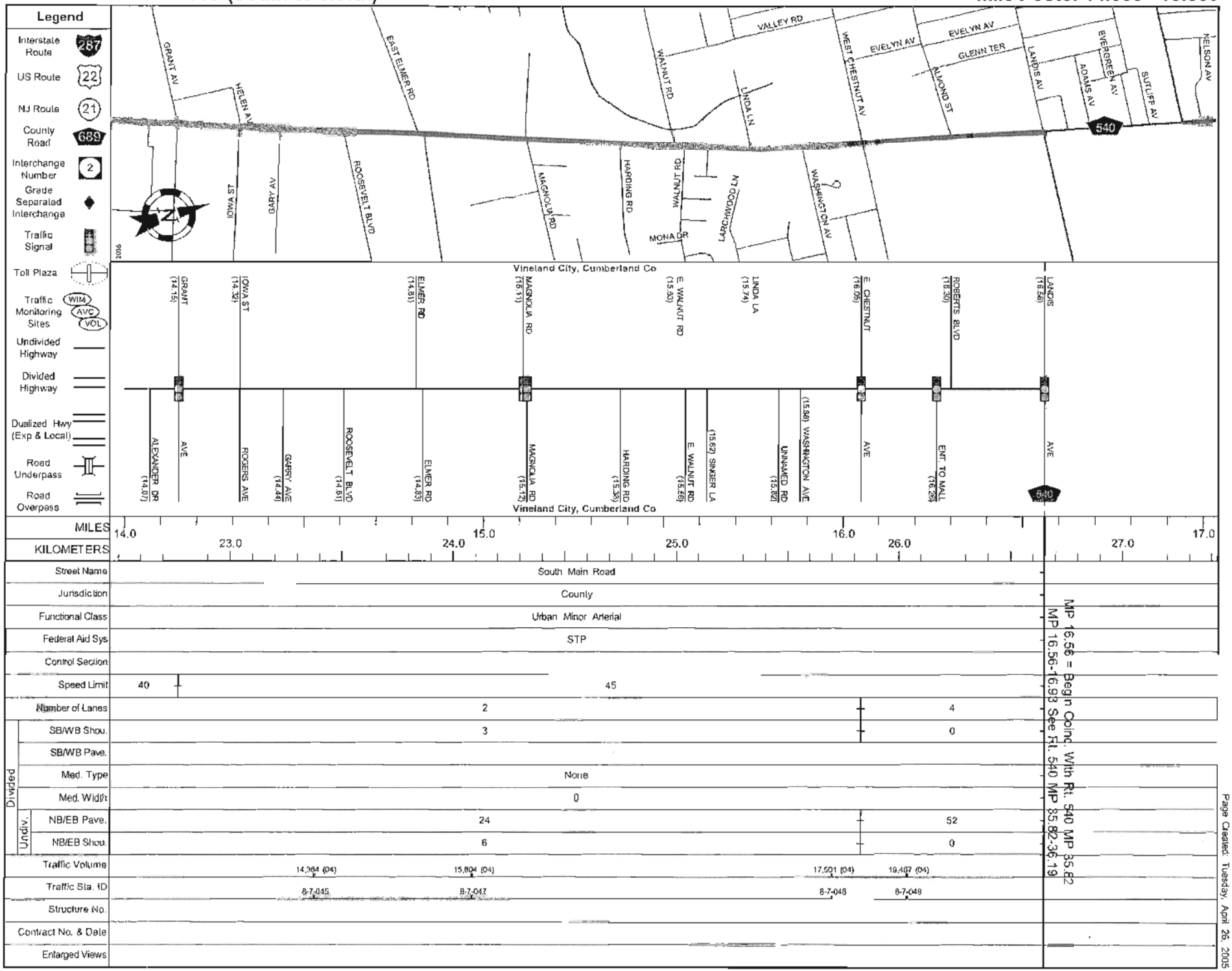
Page Created: Tuesday, April 26, 2005

SRI = 00000555__

Date last inventoried: March 2004

ROUTE 555 (South to North)

Mile Posts: 14.000 - 16.560



SRI = 00000555__

Date last inventoried: March 2004

NEW JERSEY DEPARTMENT OF TRANSPORTATION TRAFFIC COUNT SUMMARY

Total Counts

PROJECT NO:	1292-011B	SR1 NO:		To :	Pixwhey Court
ROUTE / m.p.:	RT 555 / 14.81	N-S STREET:	South Main Road		South Main Road
ROUTE / m.p.		E-W STREET:	Elmer Road		To South Spring Road
MUNICIPALITY:	Vineland City	MUN. CODE.	14		Elmer Road
COUNTY:	Cumberland	CO. CODE	06		Elmer Road
DATE(S):	03/15/06	COUNTED FOR:	NJDOT	To :	South State Street
DAY OF WEEK:	Wednesday	PERSON			
TIME(S):	7-9,12-6	COUNTED BY:	A-TECH Engineering Inc		South Main Road
WEATHER:	Cloudy	ENUMER.:	JC,SS,AR,KD	To :	Roosevelt Blvd
COMMENT:		TEMP.		VEH TYPE :	Total Volume (All Classes)

TIME	South Main Road			NB	APPROACH	South Main Road			SB	APPROACH	Elmer Road			EB	APPROACH	Elmer Road			WB	APPROACH	GRAND
PERIOD	U	LT	TH	RT	TOTAL	U	LT	TH	RT	TOTAL	U	LT	TH	RT	TOTAL	U	LT	TH	RT	TOTAL	TOTAL
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00- 7:15	0	9	59	3	71	0	1	62	6	69	0	8	5	4	17	0	0	6	6	12	199
7:15- 7:30	0	18	96	2	116	0	6	100	15	121	0	8	11	10	29	0	6	13	12	31	297
7:30- 7:45	0	12	115	1	128	0	3	114	18	135	0	12	7	7	26	0	3	18	10	31	320
7:45- 8:00	0	19	164	3	186	0	3	108	18	129	0	7	11	10	28	0	1	11	8	20	360
HOUR TOTAL	0	58	464	6	528	0	13	384	57	454	0	35	34	31	100	0	10	48	36	94	1176
8:00- 8:15	0	12	103	1	116	0	8	113	17	138	0	9	7	10	26	0	1	15	8	24	302
8:15- 8:30	0	14	102	1	117	0	4	93	14	111	0	8	8	7	24	0	3	9	4	16	288
8:30- 8:45	0	13	128	4	145	0	0	80	20	100	0	9	7	6	22	0	3	11	6	20	287
8:45- 9:00	0	20	127	3	150	0	7	111	23	141	0	10	10	14	34	0	0	11	12	23	348
HOUR TOTAL	0	59	460	9	528	0	17	397	74	488	0	36	33	37	106	0	7	46	30	83	1205
9:00- 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15- 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30- 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	7	94	3	104	0	8	121	19	148	0	11	17	12	40	0	2	7	7	16	308
12:15-12:30	0	6	116	1	123	0	9	119	14	142	0	11	7	6	24	0	2	5	7	14	303
12:30-12:45	0	10	102	2	114	0	7	118	20	145	0	9	8	7	24	0	1	7	6	14	297
12:45- 1:00	0	5	116	1	122	0	9	115	14	138	0	7	3	3	13	0	5	12	6	23	296
HOUR TOTAL	0	28	428	7	463	0	33	473	67	573	0	38	35	28	101	0	10	31	26	67	1204
1:00- 1:15	0	15	120	2	137	0	6	101	15	122	0	9	8	8	25	0	3	9	5	17	301
1:15- 1:30	0	9	111	2	122	0	10	98	12	120	0	11	7	6	24	0	2	6	6	14	280
1:30- 1:45	0	3	113	1	117	0	5	87	8	100	0	4	5	11	20	0	2	9	4	15	250
1:45- 2:00	0	7	121	3	131	0	7	95	11	113	0	8	7	10	25	0	2	7	6	15	284
HOUR TOTAL	0	34	463	8	505	0	28	381	46	455	0	32	27	35	94	0	9	31	21	61	1115
2:00- 2:15	0	14	111	1	126	0	3	107	9	119	0	8	14	9	31	0	4	9	1	14	290
2:15- 2:30	0	9	103	7	119	0	6	124	19	149	0	11	6	11	28	0	1	15	7	23	319
2:30- 2:45	0	15	121	4	140	0	7	125	18	150	0	6	8	11	25	0	1	4	5	10	325
2:45- 3:00	0	11	134	1	146	0	6	120	23	149	0	10	6	14	30	0	2	14	5	21	346
HOUR TOTAL	0	49	469	13	531	0	22	476	69	567	0	35	34	45	114	0	8	42	18	68	1280
3:00- 3:15	0	16	109	6	131	0	7	147	19	173	0	14	15	11	40	0	3	10	5	18	362
3:15- 3:30	0	15	152	5	172	0	9	150	20	179	0	14	8	9	31	0	2	6	4	12	394
3:30- 3:45	0	14	115	1	130	0	10	150	29	189	0	13	13	15	41	0	1	10	1	12	372
3:45- 4:00	0	11	140	6	157	0	10	159	22	191	0	13	16	10	39	0	2	10	6	18	405
HOUR TOTAL	0	56	516	18	590	0	36	606	90	732	0	54	52	45	151	0	8	36	16	60	1533
4:00- 4:15	0	10	138	4	152	0	15	157	26	198	0	6	7	23	36	0	2	10	4	16	402
4:15- 4:30	0	10	162	4	176	0	9	116	16	141	0	19	12	16	47	0	1	3	0	4	368
4:30- 4:45	0	14	117	2	133	0	5	202	18	225	0	5	14	20	39	0	2	10	4	16	413
4:45- 5:00	0	10	136	5	151	0	8	154	19	181	0	15	13	16	44	0	1	8	3	12	388
HOUR TOTAL	0	44	553	15	612	0	37	629	79	745	0	45	46	75	166	0	6	31	11	48	1571
5:00- 5:15	0	6	157	5	168	0	14	144	19	177	0	11	7	17	35	0	2	2	4	8	388
5:15- 5:30	0	9	142	2	153	0	6	147	16	169	0	12	21	23	56	0	4	8	2	14	392
5:30- 5:45	0	8	140	6	154	0	10	133	22	165	0	11	11	9	31	0	4	3	1	8	358
5:45- 6:00	0	4	105	6	115	0	6	102	16	124	0	7	12	17	36	0	1	8	4	14	289
HOUR TOTAL	0	27	544	19	590	0	36	526	73	635	0	41	51	66	158	0	11	22	11	44	1427
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NEW JERSEY DEPARTMENT OF TRANSPORTATION TRAFFIC COUNT SUMMARY

Total Counts

PROJECT NO:	1292-011B	SRI NO:	
ROUTE / m.p.:	RT 555 / 14.15	N-S STREET:	South Main Road
ROUTE / m.p.:		E-W STREET:	Grant Avenue
MUNICIPALITY:	Vineland City	MUN. CODE:	14
COUNTY:	Cumberland	CO. CODE:	06
DATE(S):	03/22/06	COUNTED FOR:	NJDOT
DAY OF WEEK:	Wednesday	PERSON:	
TIME(S):	7-9 12-6	COUNTED BY:	A-TECH Engineering Inc
WEATHER:	Sunny	ENUMER.:	SS,LB,AR
COMMENT:		TEMP.:	VEH TYPE: Total Volume (All Classes)

To: Iowa St / Rogers Avenue
South Main Road
To: Meade Drive
Grant Avenue
Grant Avenue
To: Helen Avenue
South Main Road
To: Alexander Drive
N

TIME PERIOD	South Main Road U	LT	TH	NB RT	APPROACH TOTAL	South Main Road U	LT	TH	SB RT	APPROACH TOTAL	Grant Avenue U	LT	TH	EB RT	APPROACH TOTAL	Grant Avenue U	LT	TH	WB RT	APPROACH TOTAL	GRAND TOTAL
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00- 7:15	0	16	71	7	94	0	1	77	13	91	0	5	3	17	25	0	5	3	3	11	221
7:15- 7:30	0	12	101	1	114	0	1	84	8	93	0	2	5	9	16	0	0	5	0	5	228
7:30- 7:45	0	20	113	0	133	0	1	86	11	98	0	7	7	16	30	0	3	10	7	20	286
7:45- 8:00	0	18	147	3	168	0	4	120	22	146	0	5	5	23	33	0	2	6	0	8	355
HOUR TOTAL	0	66	437	11	514	0	7	367	54	428	0	19	20	65	104	0	10	24	10	44	1090
8:00- 8:15	0	19	123	2	144	0	5	101	11	117	0	4	2	14	20	0	1	11	2	14	295
8:15- 8:30	0	31	107	4	142	0	2	92	16	110	0	3	6	14	23	0	0	17	9	26	301
8:30- 8:45	0	21	98	3	123	0	6	101	18	125	0	8	8	10	26	0	1	19	4	24	298
8:45- 9:00	0	27	122	2	151	0	0	91	11	102	0	10	10	19	39	0	4	13	1	18	310
HOUR TOTAL	0	98	451	11	560	0	13	385	56	454	0	25	26	57	108	0	6	60	16	82	1204
9:00- 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15- 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30- 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	12	92	0	104	0	1	95	6	102	0	6	9	14	29	0	2	5	6	13	248
12:15-12:30	0	9	103	4	116	0	5	104	6	115	0	7	4	6	17	0	0	6	3	9	257
12:30-12:45	0	10	129	2	141	0	1	106	6	113	0	8	7	15	30	0	2	9	3	14	298
12:45- 1:00	0	12	90	4	106	0	2	108	8	118	0	3	7	9	19	0	3	7	3	13	256
HOUR TOTAL	0	43	414	10	467	0	9	413	26	448	0	24	27	44	95	0	7	27	15	49	1059
1:00- 1:15	0	28	123	3	154	0	4	116	14	134	0	7	2	13	22	0	2	6	6	14	324
1:15- 1:30	0	21	107	4	132	0	2	106	9	117	0	15	8	20	43	0	2	6	2	10	302
1:30- 1:45	0	6	103	4	113	0	2	102	8	112	0	4	4	19	27	0	2	5	5	12	264
1:45- 2:00	0	20	106	3	129	0	1	91	6	98	0	4	8	15	27	0	1	4	2	7	261
HOUR TOTAL	0	75	439	14	528	0	9	415	37	461	0	30	22	67	119	0	7	21	15	43	1151
2:00- 2:15	0	15	114	4	133	0	4	95	10	109	0	1	5	10	16	0	2	5	4	11	269
2:15- 2:30	0	8	123	4	135	0	5	115	1	121	0	7	8	14	29	0	3	4	7	14	300
2:30- 2:45	0	15	105	1	121	0	18	100	9	127	0	2	4	17	23	0	1	4	1	6	277
2:45- 3:00	0	15	114	3	132	0	3	98	10	111	0	3	9	11	23	0	2	4	2	8	272
HOUR TOTAL	0	53	456	12	521	0	31	406	30	467	0	13	26	52	91	0	8	17	14	39	1118
3:00- 3:15	0	12	101	4	117	0	8	142	15	165	0	3	11	23	37	0	2	7	3	12	331
3:15- 3:30	0	13	141	4	158	0	1	128	9	138	0	1	4	24	29	0	2	3	5	10	335
3:30- 3:45	0	20	149	6	175	0	5	143	10	158	0	2	5	25	32	0	1	2	3	6	370
3:45- 4:00	0	23	163	7	193	0	9	125	9	143	0	4	13	22	39	0	4	3	3	10	385
HOUR TOTAL	0	68	553	21	643	0	23	538	43	604	0	10	33	94	137	0	9	15	14	38	1421
4:00- 4:15	0	22	164	8	194	0	6	149	7	162	0	9	8	24	41	0	1	4	1	6	401
4:15- 4:30	0	15	128	1	144	0	7	154	7	168	0	6	7	20	33	0	2	4	17	23	368
4:30- 4:45	0	16	132	4	152	0	6	167	11	184	0	7	5	23	35	0	2	3	2	7	378
4:45- 5:00	0	11	123	3	137	0	6	153	8	167	0	5	4	28	37	0	0	8	3	8	349
HOUR TOTAL	0	64	547	14	625	0	25	623	33	681	0	27	24	95	146	0	5	16	23	44	1496
5:00- 5:15	0	19	149	4	172	0	8	145	8	161	0	4	7	24	35	0	2	4	6	12	380
5:15- 5:30	0	16	144	9	169	0	2	128	3	131	0	4	9	15	28	0	3	4	2	9	335
5:30- 5:45	0	15	98	4	117	0	2	114	4	120	0	4	10	13	27	0	3	4	4	11	273
5:45- 6:00	0	11	132	3	146	0	7	120	7	134	0	4	9	14	27	0	4	4	5	13	320
HOUR TOTAL	0	61	521	20	602	0	19	505	22	546	0	16	35	64	115	0	12	16	17	45	1308
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NEW JERSEY DEPARTMENT OF TRANSPORTATION TRAFFIC COUNT SUMMARY

Total Counts

PROJECT NO: 1292-011B
ROUTE / m.p.: RT 555 / 15.11
ROUTE / m.p.:
MUNICIPALITY: Vineland City
COUNTY: Cumberland
DATE(S): 05/03/06
DAY OF WEEK: Wednesday
TIME(S): 7am-9am,12pm-6pm
WEATHER: Clear
COMMENT:

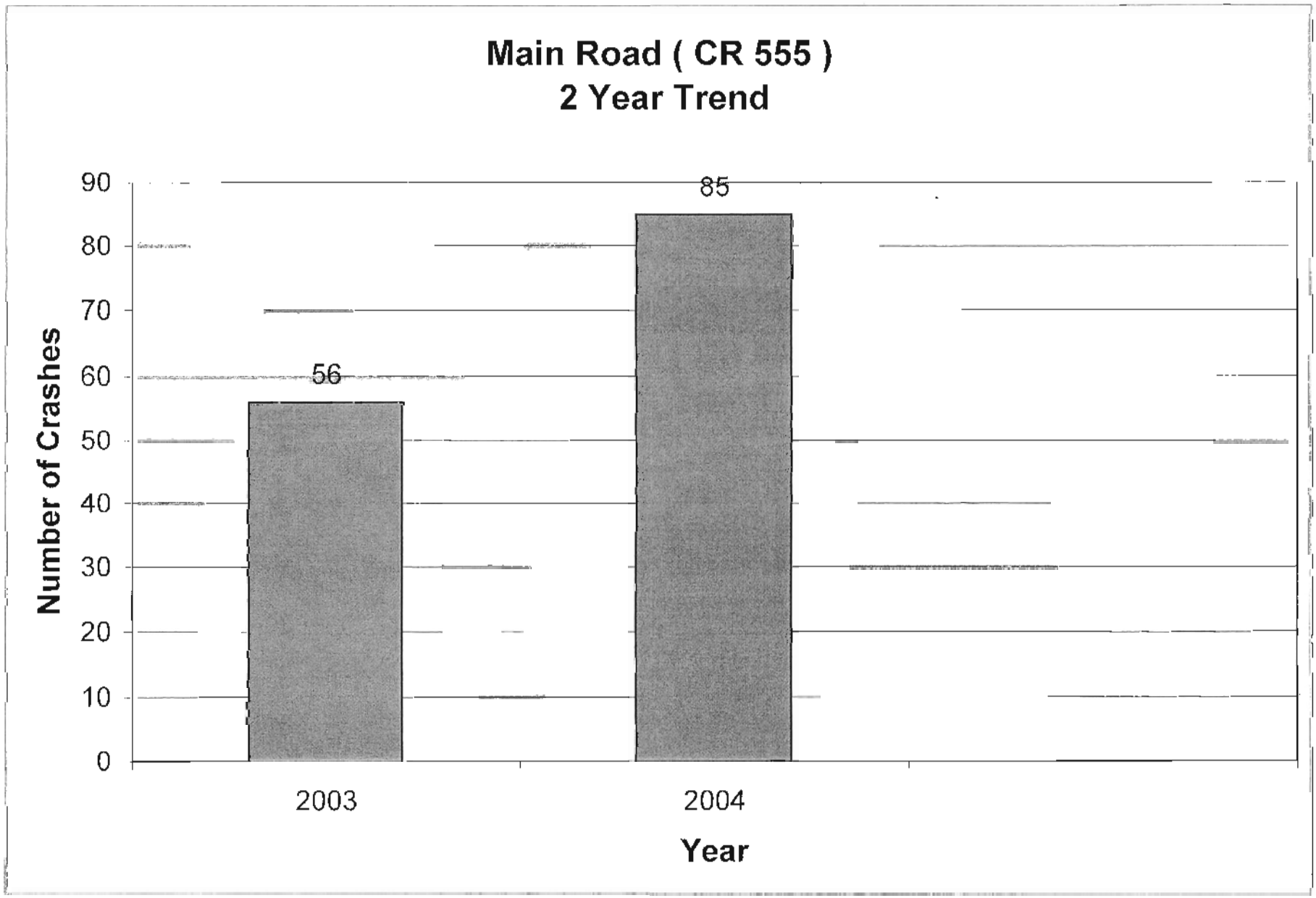
BRI NO.
N-S STREET: Main Road
E-W STREET: Magnolia Road
MUN. CODE: 14
CO. CODE: 06
COUNTED FOR: NJDOT
PERSON:
COUNTED BY: A-TECH Engineering Inc
ENUMER.: KD,SS
TEMP.:

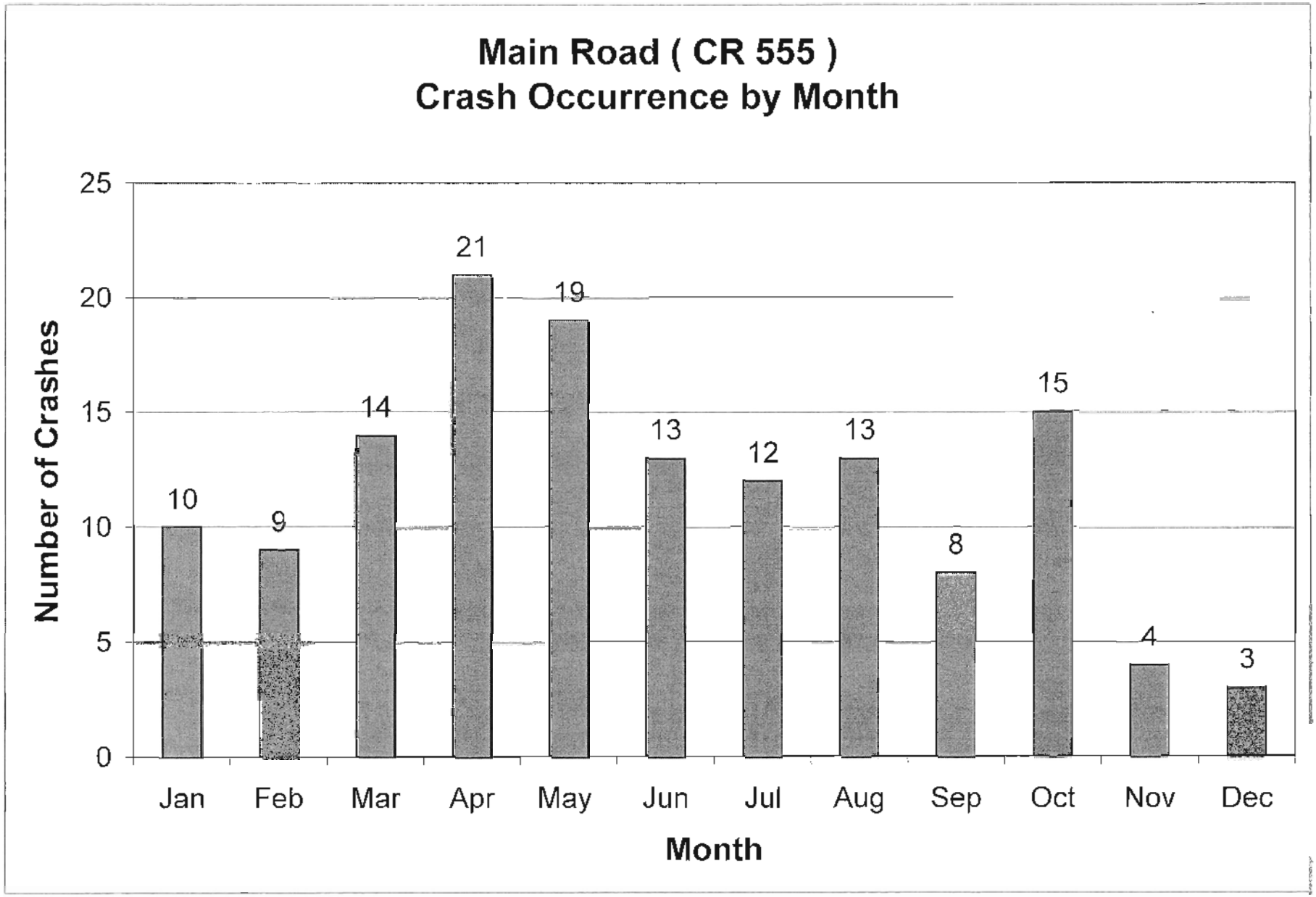
Magnolia Road: To Harding Road / Main Road
To: Dead End
Main Road: To Stewart Street / Magnolia Road
Main Road: To Elmer Road

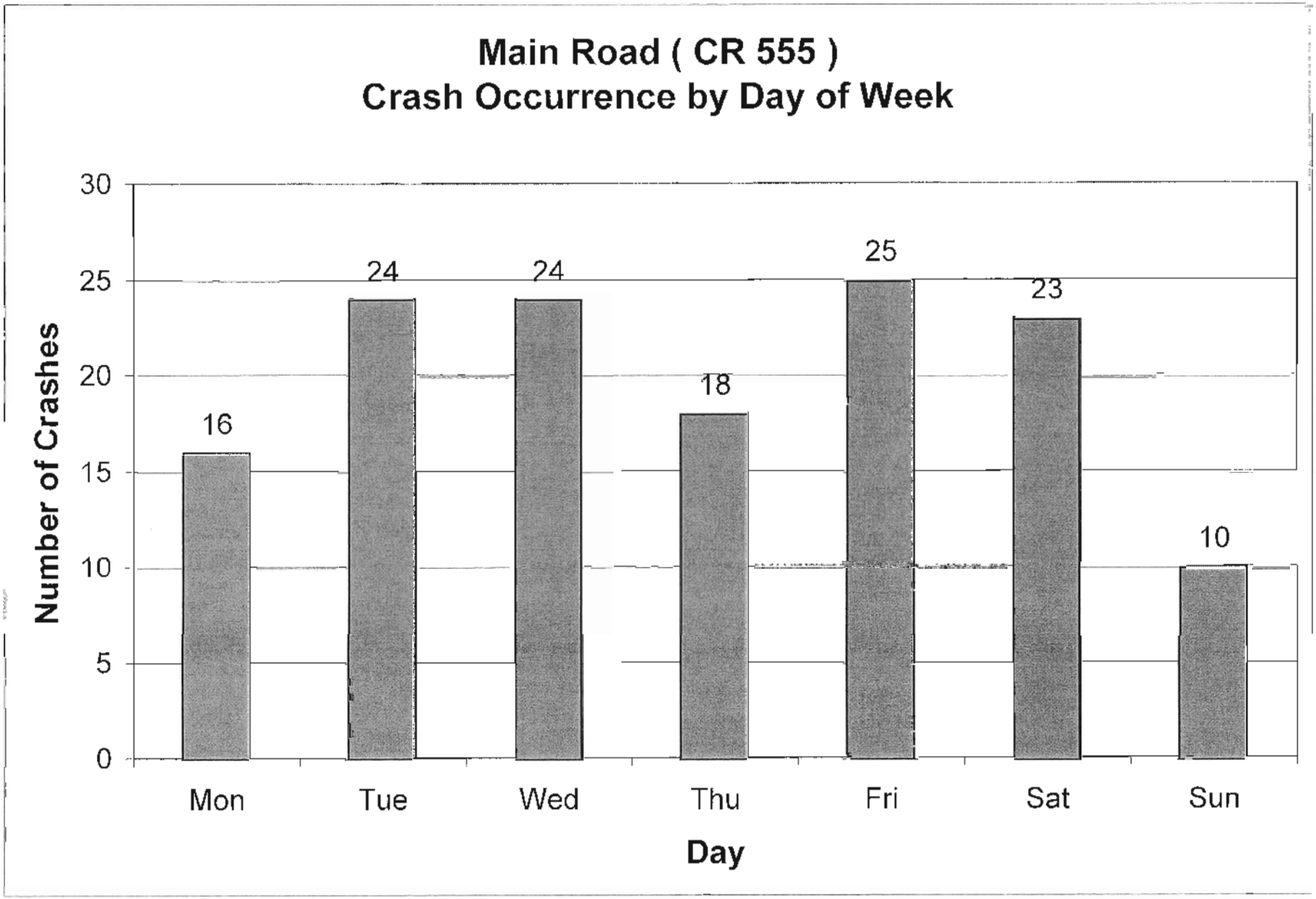
N

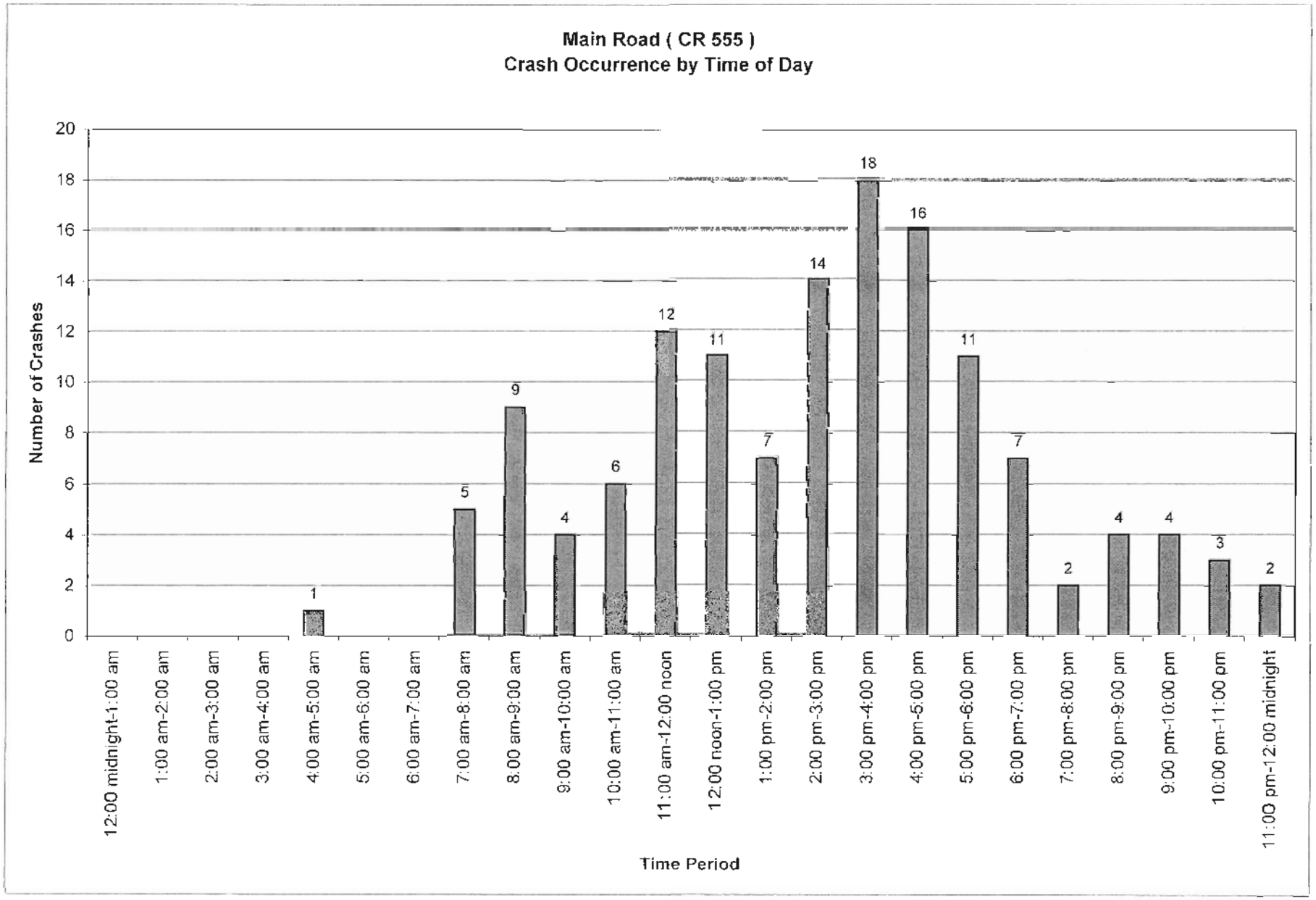
VEH TYPE: Total Volume (All Classes)

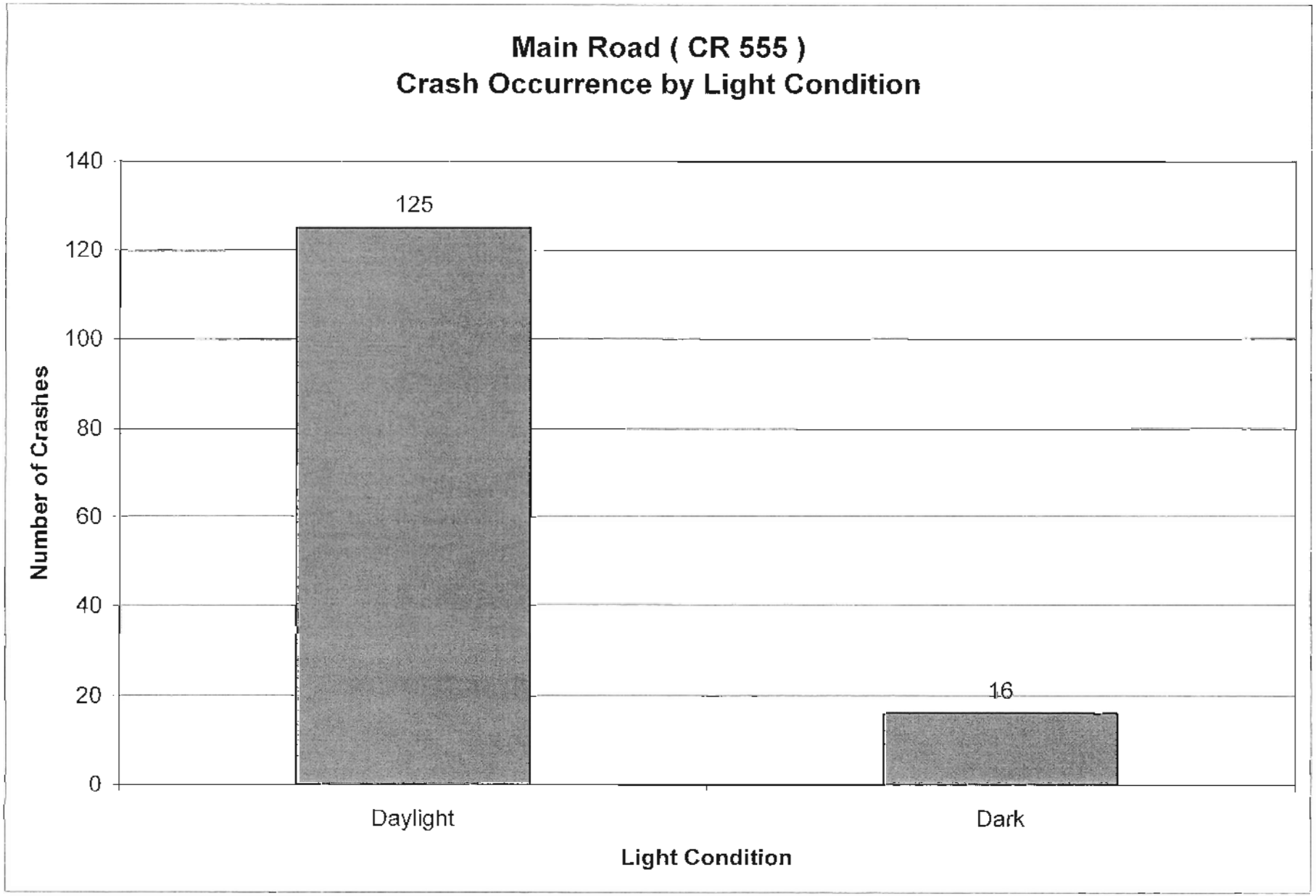
TIME PERIOD	Main Road U	LT	TH	RT	NB APPROACH TOTAL	Main Road U	LT	TH	RT	SB APPROACH TOTAL	Magnolia Road U	LT	TH	RT	EB APPROACH TOTAL	Magnolia Road U	LT	TH	RT	WB APPROACH TOTAL	GRAND TOTAL
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00- 7:15	0	0	86	13	99	0	18	77	0	95	0	1	2	0	3	0	17	0	23	40	237
7:15- 7:30	0	4	106	16	126	0	17	94	1	112	0	0	3	1	4	0	20	0	19	39	281
7:30- 7:45	0	2	133	19	154	0	14	93	5	112	0	4	1	3	8	0	29	3	31	63	337
7:45- 8:00	0	1	124	17	142	0	25	101	4	130	0	3	3	1	7	0	40	3	34	77	356
HOUR TOTAL	0	7	449	65	521	0	74	365	10	449	0	8	9	5	22	0	106	6	107	219	1211
8:00- 8:15	0	1	104	18	123	0	20	95	5	120	0	5	1	1	7	0	23	5	26	54	303
8:15- 8:30	0	2	111	14	127	0	23	89	4	116	0	6	0	6	20	0	31	4	29	64	327
8:30- 8:45	0	1	122	21	144	0	36	95	3	134	0	4	2	1	7	0	31	2	38	71	356
8:45- 9:00	0	4	148	16	168	0	39	93	9	141	0	4	2	4	10	0	34	8	45	87	406
HOUR TOTAL	0	8	485	69	562	0	118	372	21	511	0	19	11	14	44	0	119	19	137	276	1392
9:00- 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15- 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30- 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	3	91	15	109	0	12	122	3	137	0	8	3	3	14	0	18	9	13	40	300
12:15-12:30	0	7	79	10	96	0	14	94	6	114	0	11	9	4	24	0	21	8	16	45	279
12:30-12:45	0	2	97	6	105	0	13	94	4	111	0	13	4	7	24	0	17	5	16	38	278
12:45- 1:00	0	3	110	11	124	0	16	88	3	107	0	8	2	4	14	0	16	4	23	43	288
HOUR TOTAL	0	15	377	42	434	0	55	398	16	469	0	40	18	18	76	0	72	26	68	166	1145
1:00- 1:15	0	5	113	12	130	0	9	119	4	132	0	8	1	3	12	0	12	3	13	28	302
1:15- 1:30	0	2	91	11	104	0	11	105	8	124	0	6	1	7	14	0	20	2	13	35	277
1:30- 1:45	0	5	90	10	105	0	11	116	5	132	0	15	6	2	23	0	21	4	15	40	300
1:45- 2:00	0	6	103	19	128	0	14	113	5	132	0	9	6	7	22	0	18	3	15	34	314
HOUR TOTAL	0	18	395	52	465	0	45	453	22	520	0	38	14	19	71	0	69	12	56	137	1193
2:00- 2:15	0	5	115	18	138	0	11	103	7	121	0	6	1	3	10	0	9	5	29	43	312
2:15- 2:30	0	1	130	12	143	0	13	128	5	145	0	9	0	0	9	0	22	5	16	43	342
2:30- 2:45	0	4	121	17	142	0	14	121	3	138	0	5	3	6	14	0	18	2	24	42	336
2:45- 3:00	0	8	83	16	107	0	18	136	4	158	0	5	5	5	15	0	22	4	24	50	330
HOUR TOTAL	0	18	449	63	530	0	56	486	20	562	0	25	9	14	48	0	69	16	95	180	1320
3:00- 3:15	0	5	118	22	145	0	21	177	2	200	0	7	0	4	11	0	24	3	20	47	403
3:15- 3:30	0	5	136	29	170	0	28	143	1	172	0	11	5	5	21	0	29	7	16	52	415
3:30- 3:45	0	4	139	27	170	0	27	126	2	153	0	4	3	4	11	0	29	7	43	79	415
3:45- 4:00	0	2	120	10	150	0	19	131	4	154	0	5	2	5	12	0	47	6	43	96	414
HOUR TOTAL	0	16	522	97	635	0	95	577	9	681	0	27	10	18	55	0	129	25	122	276	1647
4:00- 4:15	0	3	144	23	170	0	24	163	1	188	0	4	3	8	15	0	39	6	37	82	455
4:15- 4:30	0	4	170	24	198	0	22	178	7	207	0	11	7	6	24	0	24	2	23	49	478
4:30- 4:45	0	0	119	31	150	0	30	169	4	203	0	13	5	5	23	0	21	5	30	56	432
4:45- 5:00	0	0	134	28	162	0	27	128	7	162	0	11	8	3	22	0	29	5	26	60	406
HOUR TOTAL	0	7	567	106	680	0	103	638	19	760	0	39	23	22	84	0	113	18	116	247	1771
5:00- 5:15	0	2	161	29	192	0	14	170	5	189	0	11	10	7	28	0	27	3	22	52	461
5:15- 5:30	0	6	162	17	185	0	21	163	3	187	0	8	9	7	24	0	26	7	24	57	455
5:30- 5:45	0	4	144	14	162	0	13	125	1	139	0	4	5	4	13	0	15	7	20	42	357
5:45- 6:00	0	3	127	22	152	0	9	117	5	131	0	7	9	9	25	0	17	2	18	37	345
HOUR TOTAL	0	15	594	82	691	0	57	575	14	646	0	30	33	27	90	0	88	19	84	191	1618
6:00- 6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15- 6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30- 6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45- 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOUR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

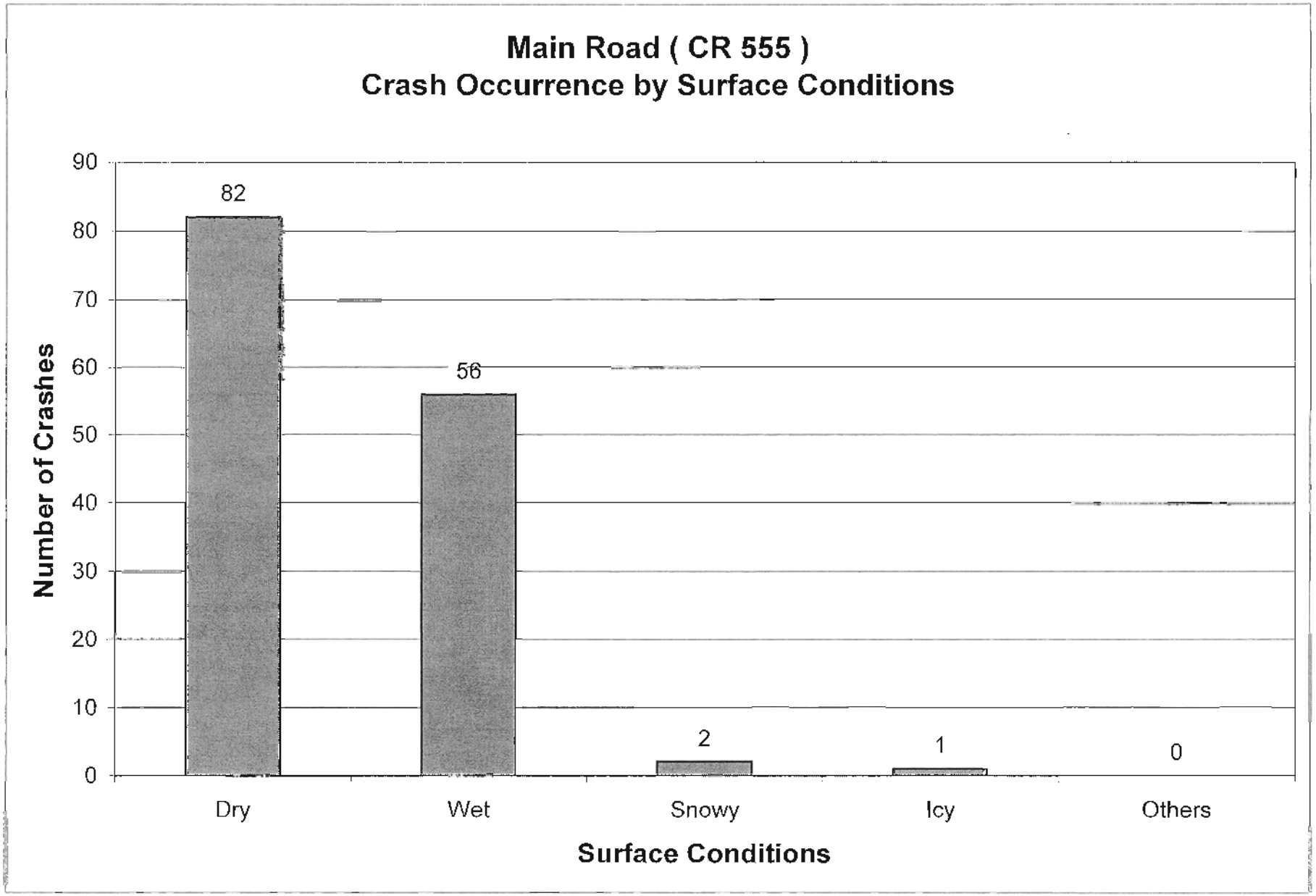

Main Road (CR 555)
2 Year Trend
Number of Crashes
90
80
70
60
50
40
30
20
10
0
56
85
2003
2004
Year

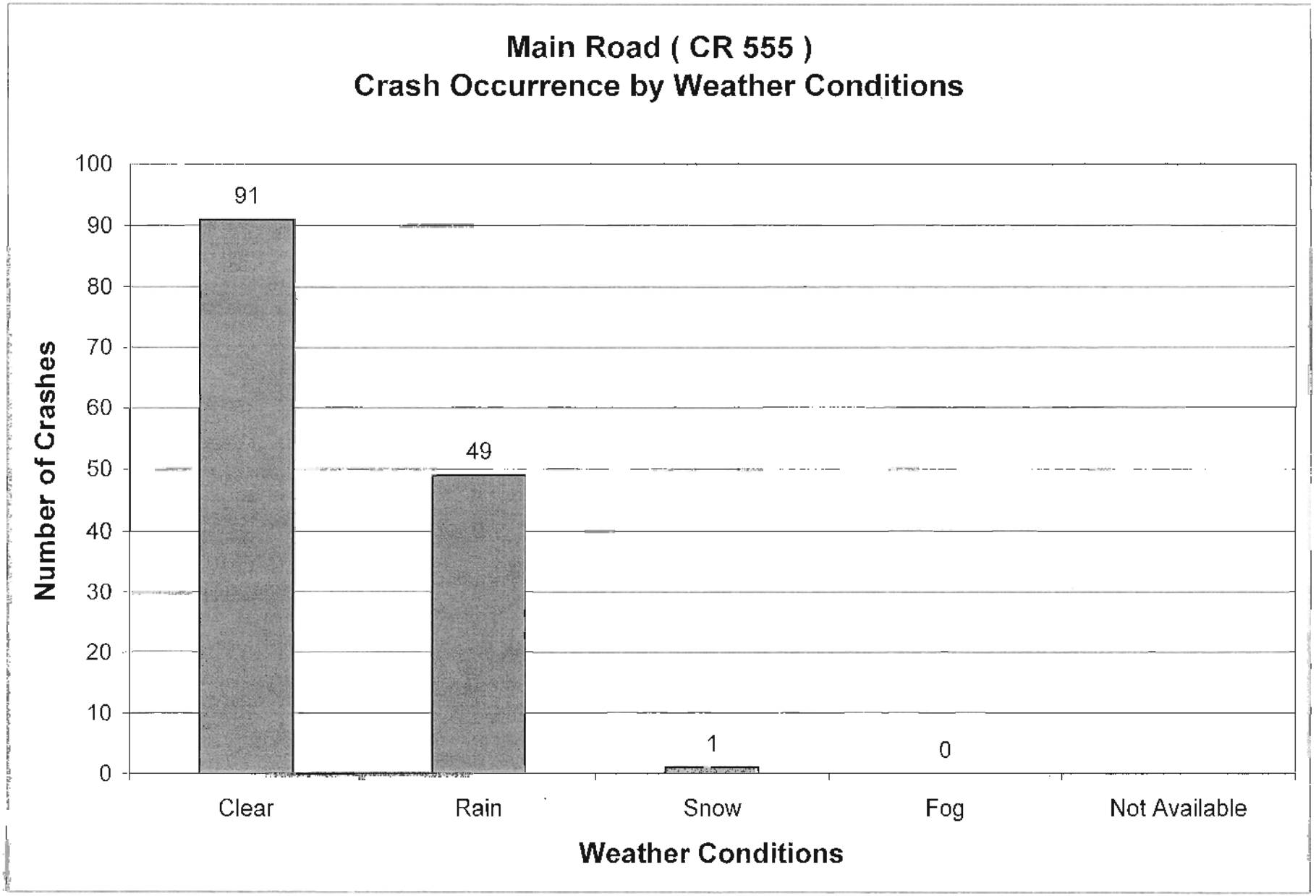

Main Road (CR 555)
Crash Occurrence by Month
Number of Crashes
25
20
15
10
5
0
10
9
14
21
19
13
12
13
8
15
4
3
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

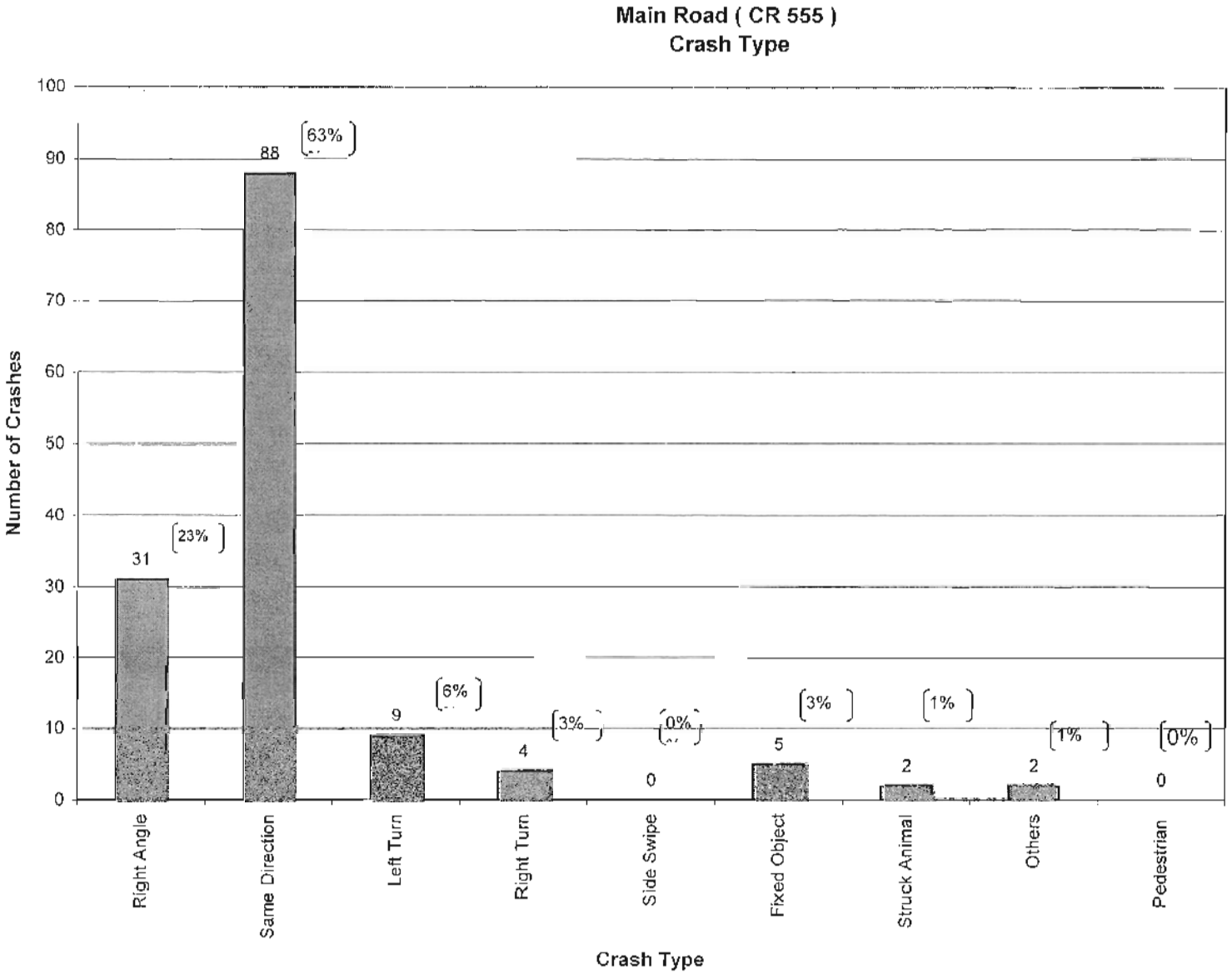

Main Road (CR 555)
Crash Occurrence by Day of Week
Number of Crashes
30
25
20
15
10
5
0
16
24
24
18
25
23
10
Mon
Tue
Wed
Thu
Fri
Sat
Sun
Day

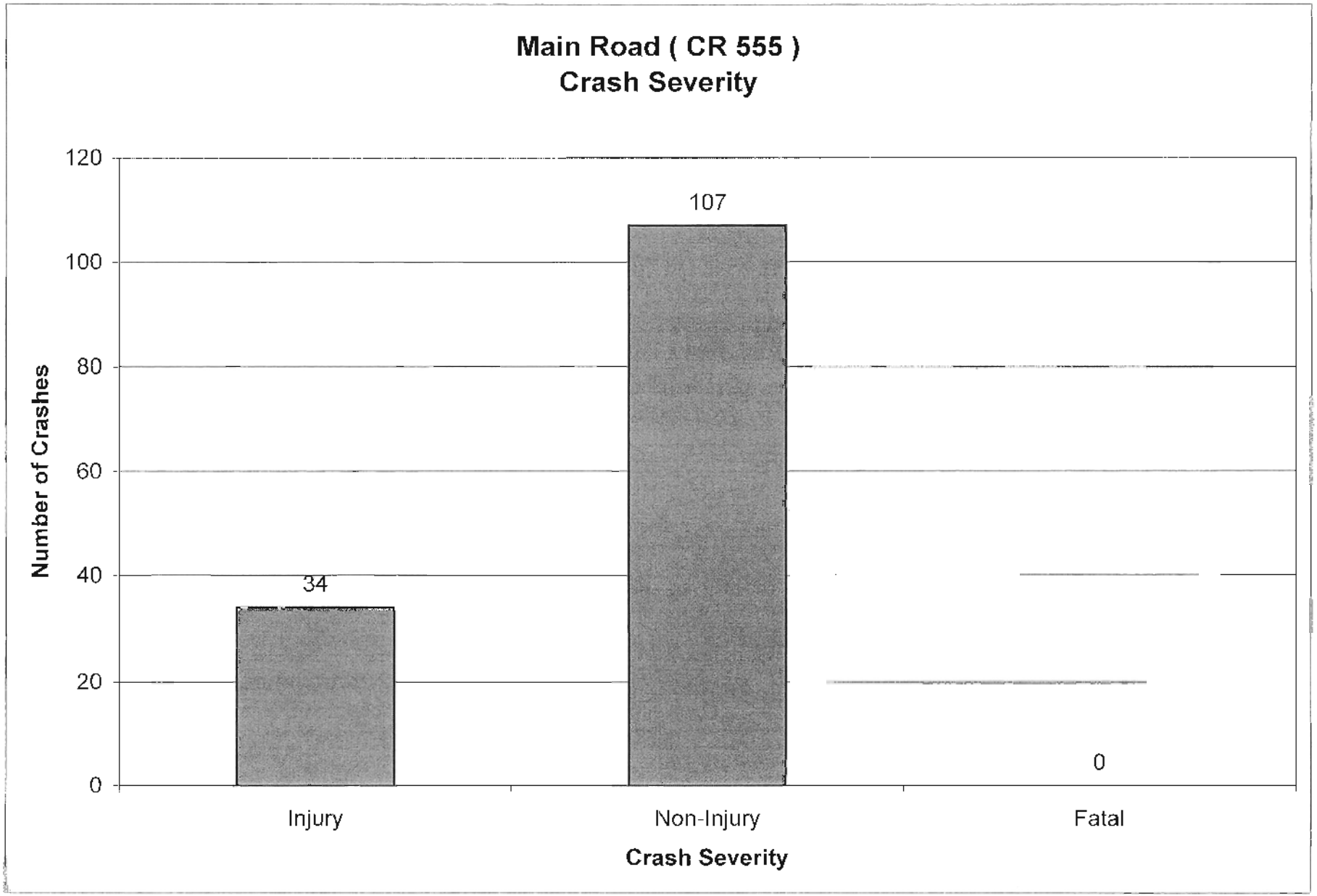

Main Road (CR 555)
Crash Occurrence by Time of Day
Number of Crashes
0
2
4
6
8
10
12
14
16
18
20
1
5
9
4
6
12
11
7
14
18
16
11
7
2
4
4
3
2
12:00 midnight-1:00 am
1:00 am-2:00 am
2:00 am-3:00 am
3:00 am-4:00 am
4:00 am-5:00 am
5:00 am-6:00 am
6:00 am-7:00 am
7:00 am-8:00 am
8:00 am-9:00 am
9:00 am-10:00 am
10:00 am-11:00 am
11:00 am-12:00 noon
12:00 noon-1:00 pm
1:00 pm-2:00 pm
2:00 pm-3:00 pm
3:00 pm-4:00 pm
4:00 pm-5:00 pm
5:00 pm-6:00 pm
6:00 pm-7:00 pm
7:00 pm-8:00 pm
8:00 pm-9:00 pm
9:00 pm-10:00 pm
10:00 pm-11:00 pm
11:00 pm-12:00 midnight
Time Period

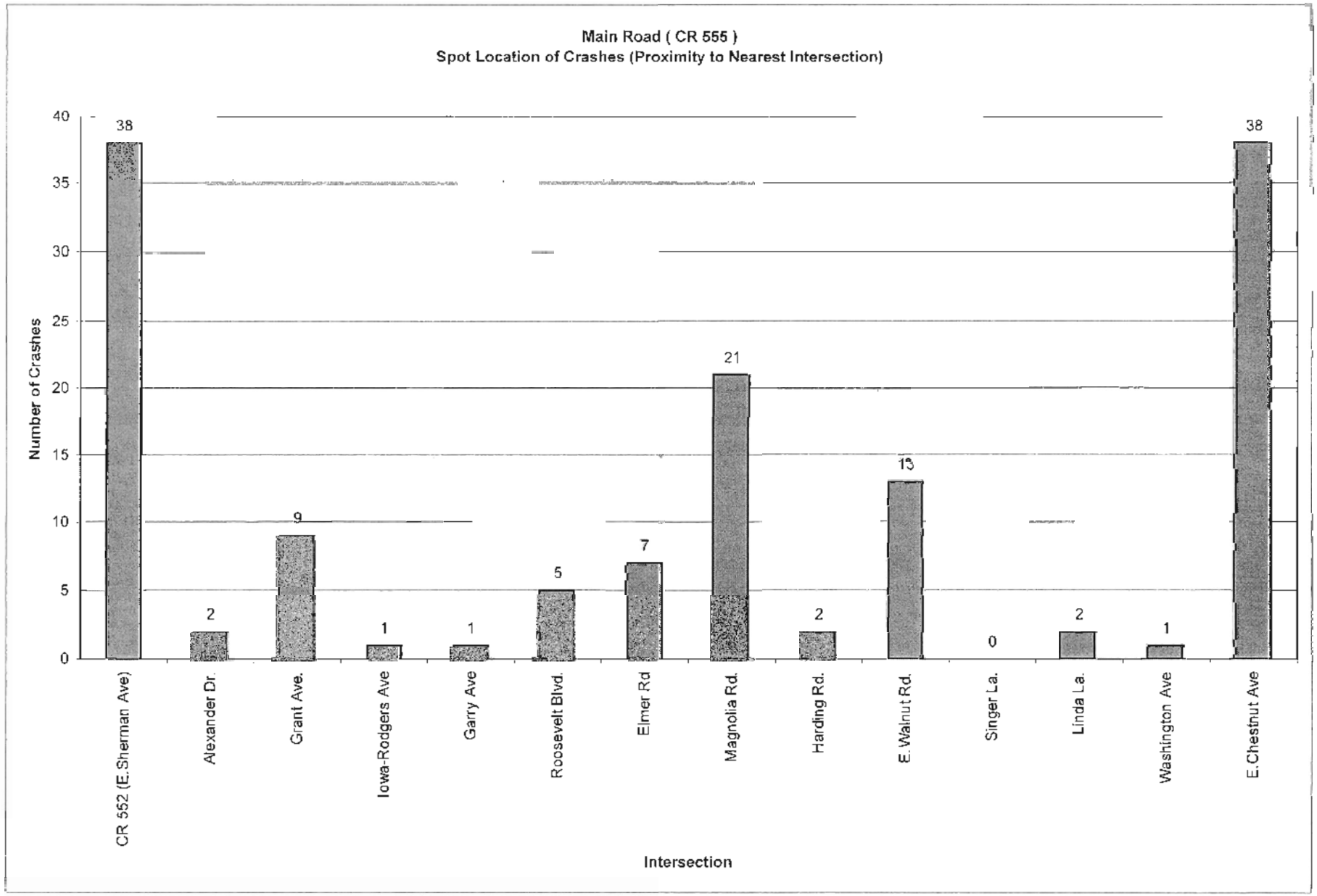

Main Road (CR 555)
Crash Occurrence by Light Condition
140
120
100
80
60
40
20
0
Number of Crashes
125
16
Daylight
Dark
Light Condition


Main Road (CR 555)
Crash Occurrence by Surface Conditions
Number of Crashes
90
80
70
60
50
40
30
20
10
0
82
56
2
1
0
Dry
Wet
Snowy
Icy
Others
Surface Conditions


Main Road (CR 555)
Crash Occurrence by Weather Conditions
Number of Crashes
100
90
80
70
60
50
40
30
20
10
0
91
49
1
0
Clear
Rain
Snow
Fog
Not Available
Weather Conditions


Main Road (CR 555)
Crash Type
Number of Crashes
100
90
80
70
60
50
40
30
20
10
0
31
23%
88
63%
9
6%
4
3%
0
0%
5
3%
2
1%
2
1%
0
0%
Right Angle
Same Direction
Left Turn
Right Turn
Side Swipe
Fixed Object
Struck Animal
Others
Pedestrian
Crash Type


Main Road (CR 555)
Crash Severity
120
100
80
60
40
20
0
Number of Crashes
34
107
0
Injury
Non-Injury
Fatal
Crash Severity


Main Road (CR 555)
Spot Location of Crashes (Proximity to Nearest Intersection)
Number of Crashes
0
5
10
15
20
25
30
35
40
38
2
9
1
1
5
7
21
2
13
0
2
1
38
CR 552 (E.Sherman Ave)
Alexander Dr.
Grant Ave.
Iowa-Rodgers Ave
Garry Ave
Roosevelt Blvd.
Elmer Rd
Magnolia Rd.
Harding Rd.
E.Walnut Rd.
Singer La.
Linda La.
Washington Ave
E.Chestnut Ave
Intersection

USE THIS
BUTTON
To CROSS
ChesTnuT

Route _____ **Date** _____

Safety Audit Stage 5 — Operation/Existing Roads

Checklist 5-1 — *General Topics*

Item	Issues to be Considered	Check	Comments
1 Landscaping	Is landscaping in accordance with guidelines (e.g., clearances, sight distance)?		
	Are required clearances and sight distances not likely to be restricted following future plant growth (landscaping and natural)?		
2 Parking	Are provisions for parking satisfactory in relation to traffic operations and safety?		
3 Temporary works	Are all locations free of construction or maintenance equipment, and any signing or temporary traffic control devices that are no longer required?		
4 Headlight glare	Have any problems due to headlight glare (e.g., two-way service road close to main traffic lanes) been addressed?		

Checklist 5-2 *Alignment and Cross Section*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Visibility, sight distances	Is sight distance adequate for the speed of traffic using the route?		
	Is adequate sight distance provided for intersections, crossings (e.g., pedestrian, cyclist, cattle, railway) etc.?		
2 Design speed	Is the horizontal and vertical alignment suitable for the (85th percentile) traffic speed? If not:		
	(a) Are warning signs installed?		
	(b) Are advisory speed signs installed?		
	Are the posted advisory speeds for curves appropriate?		

Checklist 5-2 *Alignment and Cross Section*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
3 Overtaking	Are adequate passing opportunities provided?		
4 Readability by drivers	Are there any sections of roadway which may cause confusion e.g.:		
	(a) Is alignment of roadway clearly defined?		
	(b) Has disused pavement (if any) been removed or treated?		
	(c) Have old pavement markings been removed properly?		
	(d) Do streetlight and tree lines conform with the road alignment?		

Checklist 5-2 *Alignment and Cross Section*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
5 Widths	Are all traffic lanes and roadway widths, including bridges, adequate?		
6 Shoulders	Are shoulder widths appropriate (e.g. for broken down or emergency vehicles)?		
	Are shoulders traversable for all vehicles and road users?		
	Is the shoulder cross slope sufficient to provide proper drainage?		
7 Side slopes	Are the side slopes and table drains safe for run off vehicles to traverse?		

Checklist 5-3 *Intersections*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Location	Are intersections located safely with respect to horizontal and vertical alignment?		
2 Warning	Where intersections occur at the end of high speed environments (e.g., at approaches to towns), are there traffic control devices to alert drivers?		
3 Controls	Are pavement markings and intersection control signing satisfactory?		
4 Layout	Is the alignment of curbs, traffic islands and medians satisfactory?		
	Is the intersection layout obvious to all users?		
	Are turning radii and tapers appropriate?		

Checklist 5-3 *Intersections*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
5 Visibility, sight distances	Is sight distance adequate for all movements and all users?		

Checklist 5-4 *Auxiliary Lanes and Turn Lanes*

Project _____

Audit Team Members _____

Date _____

Item	Issues to be Considered	Check	Comments
1 Tapers	Are starting and finishing tapers located and aligned correctly?		
2 Shoulders	Are appropriate shoulder widths provided at merges in accordance with design guidelines?		
3 Signs	Is signing and marking installed in accordance with standards?		
4 Turning traffic	Is there advance warning of the approaching auxiliary lane?		

Checklist 5-4 *Auxiliary Lanes and Turn Lanes*

Project _____

Audit Team Members _____

Date _____

Item	Issues to be Considered	Check	Comments
5 Visibility, sight distances	Have right turn movements within the length of the auxiliary lane been avoided?		
	Has stopping sight distance been provided to the rear of turning vehicles?		
	Has stopping sight distance been provided for entering and leaving vehicles?		

Checklist 5-5 *Non-Motorized Traffic*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Paths	Are there appropriate travel paths and crossing points for pedestrians and cyclists?		
2 Barriers and fencing	Where necessary, is fencing installed to guide pedestrians and cyclists to crossings or overpasses?		
	Is fencing of your design (e.g., avoid solid horizontal rails)?		
	Where necessary, is crash barrier installed to separate vehicle, pedestrian and cyclist flows?		
3 Bus stops	Are bus stops appropriately located with adequate clearance from the traffic lane for safety and visibility?		
4 Elderly and disabled	Are there adequate provisions for the elderly, the disabled, children, wheelchairs and baby carriages (e.g., holding rails, curb and median crossings, ramps)?		
	Where necessary, are hand rails provided (e.g., on bridges, ramps), and are they adequate?		

Checklist 5-5 *Non-Motorized Traffic*

Project _____

Audit Team Members _____

Date _____

Item	Issues to be Considered	Check	Comments
Elderly and disabled (cont.)	Distance between stop line and pedestrian crossing at signalized intersections (for visibility of pedestrians from truck driver's seat).		
	Signal timing - cycle length - pedestrian clearance time - are pedestrian buttons operable?		
5 Cyclists	Is the pavement width adequate for the number of cyclists using the route?		
	Is the bicycle route continuous, i.e., free of squeeze points or gaps?		
	Are bicycle safe grates provided at drainage pits where necessary?		

Checklist 5-6 *Signs and Lighting*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Lighting	Is appropriate lighting installed at intersections, roundabouts, pedestrian and bicycle crossings, pedestrian refuges, etc?		
	Is all lighting operating satisfactorily?		
	Are the appropriate types of poles used for all locations and correctly installed (e.g. slip base at correct height, rigid poles protected if within clear zone)?		
	Are all locations free of any lighting which may conflict visually with traffic signals or signs?		
	Has lighting for signs, particularly overhead signs, been provided where necessary?		
2 Signs	Are all necessary regulatory, warning and direction signs (including detours) in place? Are they conspicuous?		
	Are there any redundant signs?		

Checklist 5-6 *Signs and Lighting*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
Signs (cont.)	Are traffic signs in their correct locations, and properly positioned with respect to lateral clearance and height?		
	Are the correct signs used for each situation, and is each sign necessary?		
	Are signs placed so as not to restrict sight distance, particularly for vehicles?		
	Are all signs effective for all likely conditions (e.g. day, night, rain, fog, rising or setting sun, oncoming headlights, poor lighting)?		
	Do sign supports conform to guidelines?		
3 Marking and delineation	Have retroreflective markers been installed? Where colored markers are used, have they been installed correctly?		
	Is all necessary pavement marking installed?		
	Are pavement markings (center lines, edge lines, transverse lines) clearly visible and effective for all likely conditions (e.g. day, night, rain, fog, rising or setting sun, oncoming headlights, light colored pavement surface, poor lighting)?		

Checklist 5-6 *Signs and Lighting*

Project _____

Audit Team Members _____

Date _____

Item	Issues to be Considered	Check	Comments
Marking and delineation (cont.)	On light colored pavement surfaces (e.g. concrete) are RRPMs used to simulate traffic lanes?		
	Has raised profile edge marking been provided where necessary (e.g. fatigue zones)?		
	Is delineation adequate and in accordance with guidelines (e.g. post-mounted delineators, RRPMs, chevron alignment markers)?		
	Is delineation effective for all likely conditions (e.g. day, night, rain, fog, rising or setting sun, oncoming headlights)?		
	If chevron alignment markers are installed, have the correct types of markers been used?		
	Are vehicle paths through intersections delineated where required?		
	On truck routes, are reflective devices appropriate to driver's eye height?		

Checklist 5-7 *Traffic Signals*

Project _____

Audit Team Members _____

Date _____

Item	Issues to be Considered	Check	Comments
1 Operation	Are traffic signals operating correctly? Is the number and location of signal displays appropriate?		
2 Visibility	Are traffic signals clearly visible to approaching motorists?		
	Is the end of likely vehicle queues visible to motorists so that they may stop safely?		
	Have any visibility problems caused by the rising or setting sun been addressed?		
	Are signal displays shielded so that they can be seen only by the motorists for whom they are intended?		
	Where signal displays are not visible from an adequate distance, are signal warning signs and/or flashing lights installed?		
3 Other provisions	Where necessary, are there provisions for visually impaired pedestrians (e.g., audio-tactile push buttons, tactile markings)? Are they working?		
	Where necessary, are there provisions for elderly or disabled pedestrians (e.g., extended green phase, phase displacement)?		

Checklist 5-8 *Physical Objects*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Clear zone	Is a clear zone provided in accordance with the guidelines?		
	Is the appropriate treatment or protection provided for any objects within the clear zone (e.g., slip-base or frangible poles, crash barrier, crash cushions, sloping culvert, headwalls)?		

Checklist 5-8 *Physical Objects*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
2 Crash barriers	Are safety barriers installed at all necessary locations, including on bridges, in accordance with guidelines?		
	Are the crash barrier systems suitable for the purpose?		
	Is the length of crash barrier at each installation adequate? Are the crash barriers correctly installed?		
	Are Guard Rail Energy Absorbing Terminals (GREAT) or crash cushions installed where necessary (e.g., off ramp, bridge piers)?		

Checklist 5-8 *Physical Objects*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
Crash barriers (cont.)	Where works are subject to stage construction, are temporary barriers installed in accordance to guidelines?		
	Is there a safe run off area behind breakaway terminals?		
3 Fencing	Is pedestrian fencing where needed?		
	Is fencing in the clear zone free of separate horizontal rails?		
	Is there adequate delineation/visibility of barriers and fences at night?		

Checklist 5-9 *Delineation*

Project

Audit Team Members

Date

Item	Issues to be Considered	Check	Comments
1 Line markings	Are all line markings (center line, edge line, transverse lines) in good condition?		
2 Guide posts	Are guide posts correctly placed, clean, and visible?		
3 Raised and Recessed Pavement Markings	Are RPM's in good condition?		
4 Chevron Alignment Markers	Are Chevron Alignment Markers placed correctly, and used only according to standards?		

Checklist 5-10 *Pavement*

Project _____

Audit Team Members _____

Date

Item	Issues to be Considered	Check	Comments
1 Pavement defects	Is the pavement free of defects (e.g., excessive roughness or rutting, potholes, etc.) which could result in safety problems (e.g., loss of steering control)?		
2 Skid resistance	Does the pavement appear to have adequate skid resistance, particularly on curves, steep grades and approaches to intersection? Has skid resistance testing been carried out where necessary?		
3 Ponding	Is the pavement free of areas where ponding or sheet flow of water may occur with resultant safety problems?		
4 Loose screenings	Is the pavement free of loose screenings?		