

ROAD SAFETY AUDIT

State Road at Old County Road

Town of West Tisbury

August 10, 2010

Prepared For:
MassDOT Highway Division



Prepared By:
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Table of Contents

Project Data	1
Background	2
Project Description	2
Audit Observations	5
Potential Safety Enhancements	7
Summary of Road Safety Audit	9

List of Appendices

Appendix A.	RSA Meeting Agenda
Appendix B.	RSA Audit Team Contact List
Appendix C.	Detailed Crash Data
Appendix D.	Speed Regulations
Appendix E.	Traffic Volume Data
Appendix F.	Planning Board Letter

List of Figures

Figure 1.	Locus Map.....	3
Figure 2.	Location Detail.....	5

List of Tables

Table 1.	Participating Audit Team Members	1
Table 2.	Estimated Time Frame and Costs Breakdown	7
Table 3.	Potential Safety Enhancement Summary	10

Project Data

A Road Safety Audit for the intersection of State Road and Old County Road in the Town of West Tisbury, MA on Martha's Vineyard was held on July 13, 2010 at the West Tisbury Town Hall. As indicated in Table 1, the audit team consisted of representatives from State, Regional and Local agencies and included a cross-section of engineering, planning and emergency response expertise.

Table 1. Participating Audit Team Members

Audit Team Member	Agency/Affiliation
Bonnie Polin	MassDOT Highway Division – Safety Section
Lisa Schletzbaum	MassDOT Highway Division – Safety Section
Robert Gregory	MassDOT Highway Division District 5 - Projects
Pamela Haznar	MassDOT Highway Division District 5 – Project Development
Chris Chaffee	MassDOT Highway Division - Intern
Susan Silk	Martha's Vineyard Times (reporter)
Bill Venio	Martha's Vineyard Commission – Senior Planner
Mark London	Martha's Vineyard Commission – Executive Director
Michael Mauro	Martha's Vineyard Commission – Planner
Bea Phear	West Tisbury resident
Dan Greenbaum	Martha's Vineyard Joint Transportation Committee (JTC)
John Christensen	Town of West Tisbury – Emergency Management Director
Cynthia Mitchell	Town of West Tisbury Selectman
Richard Knabel	Town of West Tisbury Selectman
Jennifer Rand	Town of West Tisbury Town Administrator
Manuel Estrella III	Town of West Tisbury Fire Chief
Richard Olsen	Town of West Tisbury Highway Superintendent
Daniel Rossi	Town of West Tisbury Police Chief
"Skipper" Manter	Town of West Tisbury Police Dept. & Selectman
David Douglas	Town of West Tisbury Planning Board
Simone DeSorcy	Town of West Tisbury Planning Board – Board Administrator
Jim Powell	Town of West Tisbury Planning Board
Susan Silva	Town of West Tisbury Planning Board
Greg Lucas	BETA Group, Inc.
Christine Keches	BETA Group, Inc.

Background

The Federal Highway Administration defines a Road Safety Audit (RSA) as *the formal safety examination* of an existing or future road or intersection by an *independent, multidisciplinary team*. The purpose of an RSA is to *identify potential safety issues and possible opportunities for safety improvements* considering all roadway users. A Road Safety Audit was scheduled for the location as part of RSA training for the Martha’s Vineyard Commission (MVC). The intersection of State Road and Old County Road was identified as a location of concern by the MVC and the Town. The purpose of the RSA is to identify both short term and long term safety improvements that can be made at the subject intersection.

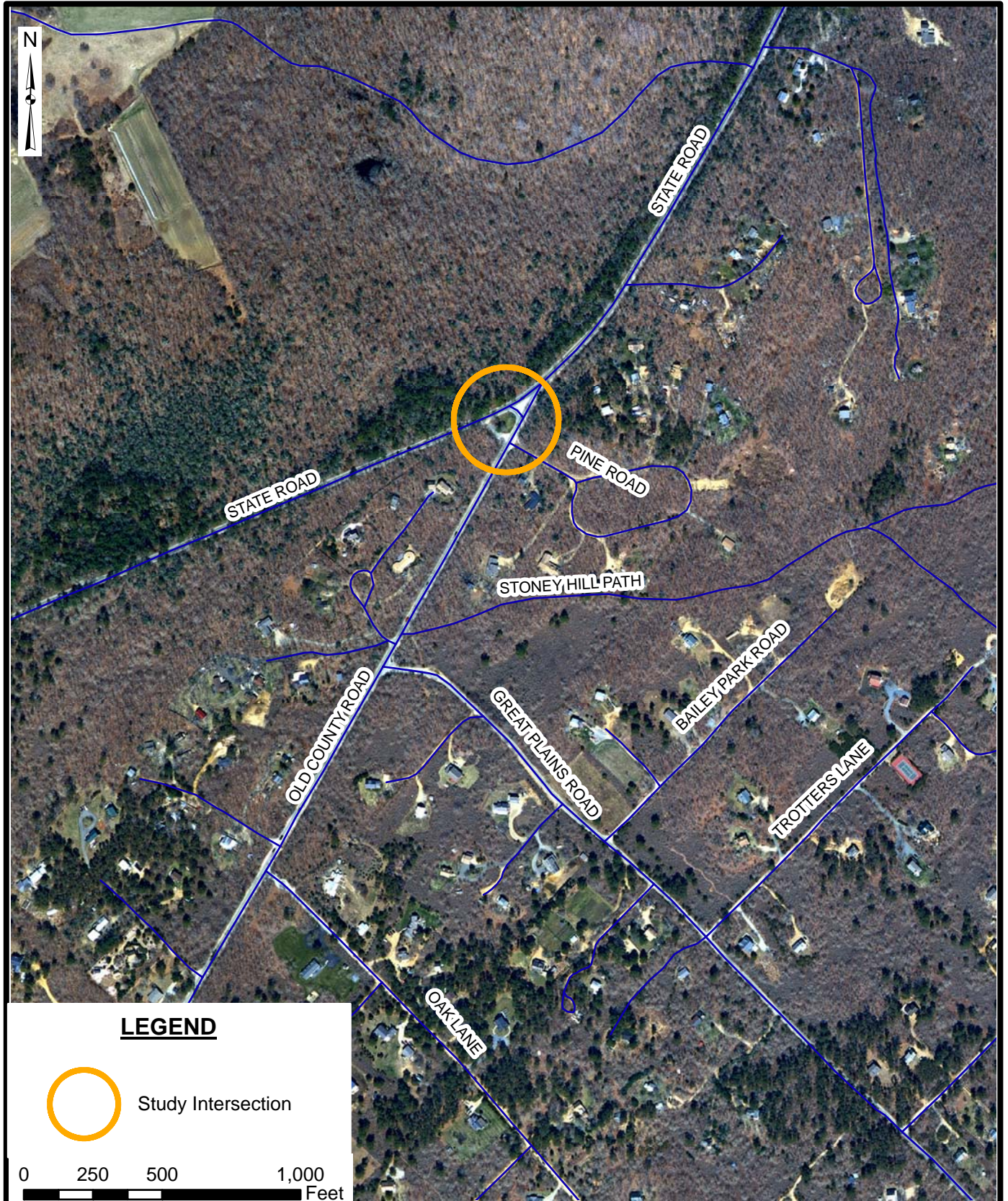
Project Description

The intersection of State Road and Old County Road, shown in Figure 1, is located in the northeastern portion of West Tisbury. State Road is a state-owned roadway functionally classified as a Rural Major Collector. Old County Road is a town-owned roadway functionally classified as a Rural Minor Collector. State Road is an important regional roadway, providing access from Tisbury (Vineyard Haven) and Oak Bluffs to the “Up-Island” communities of West Tisbury, Chilmark and Aquinnah to the west. It was noted by local officials that the intersection acts as an informal gateway to West Tisbury for people traveling westward (up-island) on State Road.



State Road at Old County Road

State Road and Old County Road form a 3-way intersection, with Old County Road under STOP control. Old County Road intersects State Road at an acute angle rather than at a 90° angle, and splits into two 2-way segments separated by a painted gore area on the pavement. This separation into two 2-way segments at an intersection is common of intersections on Martha’s Vineyard, but the segments at other intersections are typically separated by a vegetated island. There is a vegetated island at the intersection that separates Old County Road from a paved area that is used for fire truck access to an adjacent water pump. There is a gate blocking access to the fire access lane from State Road. The vegetated island is home to several mature trees. There are no sidewalks or other pedestrian accommodations at the intersection.



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State Rd at Old County Rd

ROAD SAFETY AUDIT

WEST TISBURY, MA

Figure 1

Location Map

Land use in the area is primarily residential, with sparsely spaced homes along both State Road and Old County Road. There is a wooded area north of the intersection along State Road which is owned by the Martha's Vineyard Land Bank. Pine Road is an unpaved road with no outlet which intersects Old County Road approximately 180 feet south of State Road.

Crash data were provided by the West Tisbury Police Department and are included in the Appendix. There were a total of seven crashes at the intersection within the period from May 2006 to May 2010, which are mapped on the collision diagram included in the Appendix. Four of the seven crashes were angle-type crashes between a westbound vehicle turning from State Road onto Old County Road and an eastbound through vehicle. It was suggested during the audit that the acute angle geometry of State Road and Old County Road combined with the limited sight distance due to the horizontal curve in State Road are significant factors in the prevalence of this type of angle crash. Of the remaining three crashes, one involved a westbound vehicle striking a deer, one was a rear-end crash of westbound vehicles involving a 16 year old driver who had been licensed for under six months, and one was a crash on Old County Road where a southbound vehicle struck a northbound vehicle in a sideswipe-type crash. It was noted during the audit by West Tisbury Police that all but one of the drivers involved in the crashes were Island residents who may be more familiar with this intersection. The crash rate for the intersection is 0.39 crashes per million entering vehicles (MEV), which is below the MassDOT District 5 average for unsignalized intersections of 0.66 crashes per MEV. There is no Martha's Vineyard island-wide average available at this time.

Speed and volume data were collected in July 2009 and are included in the Appendix. Volume data show an average daily traffic (ADT) of 5,200 vehicles per day (vpd) on State Road westbound, 3,600 vpd on State Road eastbound, and 2,500 vpd on Old County Road. Speed data show an 85th percentile speed of 42 mph for State Road westbound, 44 mph for State Road eastbound, and 44 mph for Old County Road. The 85th percentile speed is defined as the speed at which 85 percent of the traffic is traveling at or below. Speed regulations maintained by MassDOT establish a 40 mph speed limit for State Road in both directions in the vicinity of Old County Road, and a 45 mph speed limit for Old County Road with a reduction to 25 mph within 600 feet of the intersection.

Manual Turning Movement Counts (TMC) were conducted at the intersection by the MVC in August 2009. The data show that the morning peak hour occurred from 7:45 AM to 8:45 AM, with the afternoon peak hour from 4:00 PM to 5:00 PM. The data also show that there is a heavy volume of left turning traffic from State Road westbound to Old County Road, with 115 left turns in the morning peak hour and 165 lefts in the afternoon peak hour. Complete TMC data are included in the Appendix. It should be noted that although morning and afternoon peak hour volumes are provided, the ADT data show that the highest hour of overall intersection volume occurs at midday.

Audit Observations

Following a brief introduction to the RSA process and a summary of traffic volumes and crash information, the audit participants were asked to discuss safety issues at the intersection of State Road and Old County Road. Audit participants then conducted a site visit as a group, at which time they offered observations on safety issues. A summary of those major safety considerations is as follows:

- Geometrics – The alignment of Old County Road and State Road results in very little deflection for vehicles making a left turn from State Road westbound onto Old County Road. The slight deflection combined with the horizontal curve create a potential safety issue which may contribute to the history of angle-type crashes between westbound left-turning vehicles and eastbound through vehicles. Westbound left-turning vehicles turn from a number of different points due to the large area of pavement available to accept them on Old County Road. Vehicles were observed during the audit taking a sweeping turn and nearly encroaching on the northbound lane for Old County Road, while other vehicles were observed beginning their turn further westbound and making more of a 90° turn and encroaching on the painted gore area between the two 2-way segments of Old County Road. Additional concerns related to westbound left-turning traffic are categorized below.



Figure 2. Location Detail

- Speed – The smaller deflection angle for turning vehicles allows drivers to navigate the turn at a higher rate of speed than if they had to slow to make a 90° turn. Local officials and police present at the audit noted that speed is a safety issue at this location.
- Sight Distance – This is another safety issue at the intersection which is related to the intersection geometry. A westbound left-turning vehicle which enters its turn from a point east of the intersection has its visibility constrained by the horizontal curve along State Road as well as by mature trees along the north side of State Road.



Trees restrict visibility of eastbound traffic for westbound left turning vehicles

- Driver Confusion – Martha’s Vineyard is a popular vacation destination during the summer months, and as a result many drivers may be unfamiliar with how to reach their destination while navigating the island. Local police stated that they often see westbound vehicles pull off the road to read maps or use cell phones near the intersection. There are signs located in the vegetated island which direct vehicles to Old County Road, but there are no directional signs in advance of the intersection. Despite the expected unfamiliarity from seasonal traffic, it should be noted that all but one of the crashes reported at the intersection involved Martha’s Vineyard residents.
- Limited stacking for Old County Road – The split approach alignment of Old County Road at State Road may create a safety issue. Northbound vehicles waiting to make a left turn onto State Road may queue across the southbound lane, which would cause State Road westbound left-turning vehicles to slow for the blockage. These left-turning vehicles could then potentially be struck by eastbound through traffic on State Road.

Potential Safety Enhancements

After the site visit, audit participants returned to the meeting location to discuss the safety issues and consider potential improvements. Audit participants were encouraged to consider both short and long term improvements for each issue. Each improvement considered has been categorized as short-term, mid-term, or long-term based on the definitions shown in Table 2. Additionally, a cost category has been assigned to each improvement based on the parameters set forth in Table 2. All noted improvements should be considered a “potential” improvement; improvements may need additional engineering judgment to determine the applicable and critical details.

Table 2. Estimated Time Frame and Costs Breakdown

Time Frame		Costs	
Short-term	<1 year	Low	<\$10,000
Mid-term	1–3 years	Medium	\$10,001–\$50,000
Long-term	>3 years	High	>\$50,000

The following improvements were suggested by audit participants to improve safety issues associated with the intersection of State Road and Old County Road.

- Modify striping to create “T” intersection. It was suggested that markings could be modified as a short-term measure to create a single approach for Old County Road at State Road. This single approach could be aligned within existing pavement and should accommodate turning movements from large trucks. This would increase the turning angle for westbound left turning vehicles, which should reduce speeds and would require them to begin their turning movement from a point further west than where turning movements currently occur. It was suggested following the audit that new markings without geometric changes may not cause drivers to alter their behavior when approaching the intersection from Old County Road, and as such could create an additional unwanted safety issue. Additionally, a dusting of snow would cover the markings and cause vehicles to operate within the geometric constraints rather than the striping constraints. Therefore, this potential improvement should only be considered in conjunction with curb or berm along the southeast corner to reduce the available pavement for the Old County Road approach. This additional modification would require investigation of existing drainage. Modified markings in conjunction with curb or berm would be a low cost, short term improvement. Any modification of markings without resurfacing or reconstructing pavement would require eradication of the existing markings.
- Add a dotted yellow guide line along State Road. In addition to the re-application of existing markings, it was recommended that a dotted yellow guide line be added through the intersection to define the State Road alignment. This will provide a visual cue to left-turning vehicles as to when they are departing their lane to begin their turning movement. This also reinforces the fact that vehicles turning left onto Old County Road are leaving the main road and entering a secondary road. This is a short-term, low cost improvement.

- Provide wider stop lines on Old County Road approach(es). Another short-term, low cost improvement involving pavement markings would be to stripe a 24” stop line on Old County Road. This was not specifically discussed at the audit, but could be accomplished in conjunction with pavement marking modifications or by applying new, wider markings over the existing stop lines. This would create a more noticeable area for potentially encroaching vehicles.
- Add delineators on State Road. The majority of the audit participants were in support of adding flexible yellow reflective delineators along the center line of State Road on the westbound approach to Old County Road. The purpose of delineators would be to provide a physical barrier requiring westbound left-turning vehicles to begin their turn from a point further west. Placement and spacing of delineators is a short-term, low cost improvement that would require MassDOT approval. Delineators present a potential maintenance concern because of knockdown potential and snowplowing operations. Delineator spacing needs to be carefully considered so that sight distance is not impacted. It should be noted that Chief Rossi conducted an experiment mimicking delineator placement using orange cones on the day of the audit. Vehicles slowed before making their turn and were forced to turn from a point further west. Vehicle speeds may also have been reduced due to the impact of a parked police car and the number of people in safety vests in the vegetated median during the cone experiment.
- Construct island on Old County Road. An alternative to delineator placement along State Road would be to construct a raised island along Old County Road. Although this was not discussed at the audit, it addresses the same goal of introducing a physical barrier to define the turning path for westbound left-turning vehicles. The island would separate northbound and southbound traffic at the stop line and should be a minimum of 6 feet in width and 12.5 feet in length, although a larger island would provide an even greater benefit as a physical geometric constraint. This would be a short-term, medium cost improvement that could be constructed within the existing pavement width and would also require modification of existing pavement markings. The audit team did discuss the feasibility of an island on State Road, but it was determined that it was not a viable short-term improvement because it would require widening of State Road to meet minimum lane width and island size requirements. The construction of an island on State Road could be considered as a long-term solution, dependent upon evaluation of short-term measures.
- Add a sign on the State Road westbound approach. It was noted that unfamiliar drivers are not aware of the name of Old County Road until they see the sign in the vegetated island, which may create a safety issue from quick stops or sudden turns. It also was noted that vehicles pull over before the intersection to consult maps or use cell phones. Two options were discussed for sign placement. The first was a small supplemental plaque under the existing curve warning sign which says “Old County Road Next Left”. It was noted by MassDOT that the lettering may be too small on a supplemental plaque to provide readability for approaching vehicles, and that a more typical advance street name sign should be provided in advance of the curve warning sign. A typical example from the Manual On Uniform Traffic Control Devices (MUTCD) is shown at right, but the sign design can be modified to match other guide signs used on Martha’s Vineyard. This is a short-term, low cost improvement.



- Remove trees on north side of State Road. It was noted during the audit that the mature trees on the north side of State Road block visibility of approaching eastbound vehicles for westbound left-turning traffic. There appear to be three to four trees to be removed along with overgrowth to be cleared to aid in sight distance. This is a short-term, low cost improvement.
- Remove object marker on vegetated island. There is an object marker facing westbound traffic on the nose of the vegetated island that separates Old County Road from the fire access road. MassDOT uses this sign only when travel is allowed immediately adjacent to the object to the left and to the right of the sign, such as a delta island for a free right turn. This sign should be removed to avoid confusion. This is a short-term, low cost improvement.

A number of alternatives for the long-term improvements at the intersection have been discussed prior to the audit between MassDOT District 5, the Town of West Tisbury, and the Martha's Vineyard Commission, and were further discussed at the audit with little to no consensus. It was decided at the audit that an evaluation of short-term measures should be undertaken before deciding upon long-term improvements. If realignment of the intersection via modified pavement markings proves effective, a medium-term improvement could be to remove excess pavement not used by the new alignment.

Summary of Road Safety Audit

Table 3 summarizes potential recommendations discussed by the audit team. The recommendations are categorized based on the potential safety payoff, as well as by time frame and cost. The safety payoff is a qualitative judgment of the effectiveness of the potential safety improvements.

Table 3. Potential Safety Enhancement Summary

Safety Issue	Safety Enhancement	Safety Payoff	Time Frame	Cost
Geometrics, Speed, Sight Distance, Driver Confusion, Limited Stacking	Modify striping to create “T” intersection, and install curb/berm to delineate edges. (This improvement also includes eradication of conflicting existing markings.)	High	Short-term	\$10,000
Geometrics, Speed, Sight Distance, Driver Confusion, Limited Stacking	Remove excess pavement following striping modification. (This improvement assumes that the modified striping has been evaluated and proven to be effective.)	High	Medium-term	\$20,000
Geometrics, Speed, Sight Distance, Driver Confusion	Add delineators along the double yellow centerline on the eastern leg of State Road.	Medium	Short-term	\$4,000
Geometrics, Speed, Sight Distance, Driver Confusion	Construct island on Old County Road.	Medium	Short-term	\$20,000
Driver Confusion	Add an advance street name sign on State Road for Old County Road.	Medium	Short-term	\$500
Sight Distance	Remove trees and underbrush along north side of State Road.	Medium	Short-term	\$5,000
Driver Confusion	Provide wider stop lines on Old County Road approach(es). (This improvement can be accomplished with or without pavement marking or geometric modifications.)	Low	Short-term	\$200
Driver Confusion	Add a dotted yellow guide line along State Road.	Low	Short-term	\$1,000
Driver Confusion	Remove object marker from vegetated island.	Low	Short-term	\$200
Geometrics, Speed, Sight Distance, Driver Confusion, Limited Stacking	To be determined pending outcome of short-term measures.	TBD	Long-term	TBD

Appendix A. RSA Meeting Agenda

Agenda

Road Safety Audit

West Tisbury – State Road / Old County Road

Meeting Location: West Tisbury Town Hall

Tuesday, July 13th, 2010

11:00 AM – 1:00 PM

Purpose: To Address a Specific Crash Concern
Attendees: Invited Participants to Comprise a Multidisciplinary Team
Please bring: Thoughts and Enthusiasm!

11:00 AM Welcome and Introductions

11:15 AM Review of Site Specific Material

- Existing Conditions
- Crash Data, Volume & Speed Summaries

11:45 AM Visit the Site

- Drive/walk to the intersection State Road / Old County Road
- As a group, identify areas for improvement

12:30 PM Completion of RSA

- Finalize discussion on all areas for improvement
- Discuss potential improvements with pros and cons and record possible countermeasures

1:00 PM Adjourn for the Day – but the RSA has not ended

Instructions for Participants:

- Before attending the RSA on July 13th, participants are encouraged to drive / walk through the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others' opinions are key elements to the success of the overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.

Appendix B. RSA Audit Team Contact List

Appendix C. Detailed Crash Data

Existing Conditions

Speed Regulations:

State Road – 40 MPH
Old County Road – 25 MPH

Diagram:

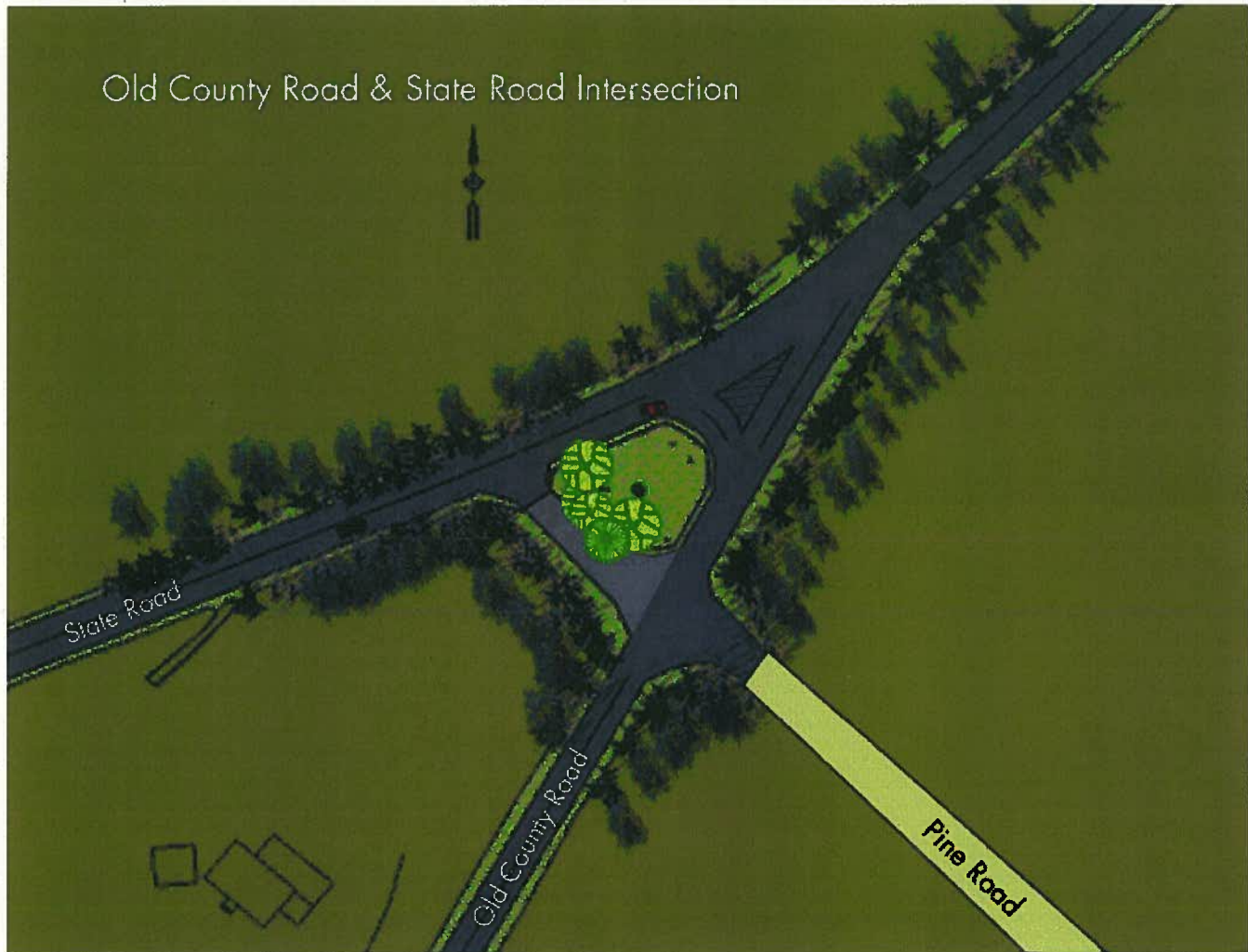


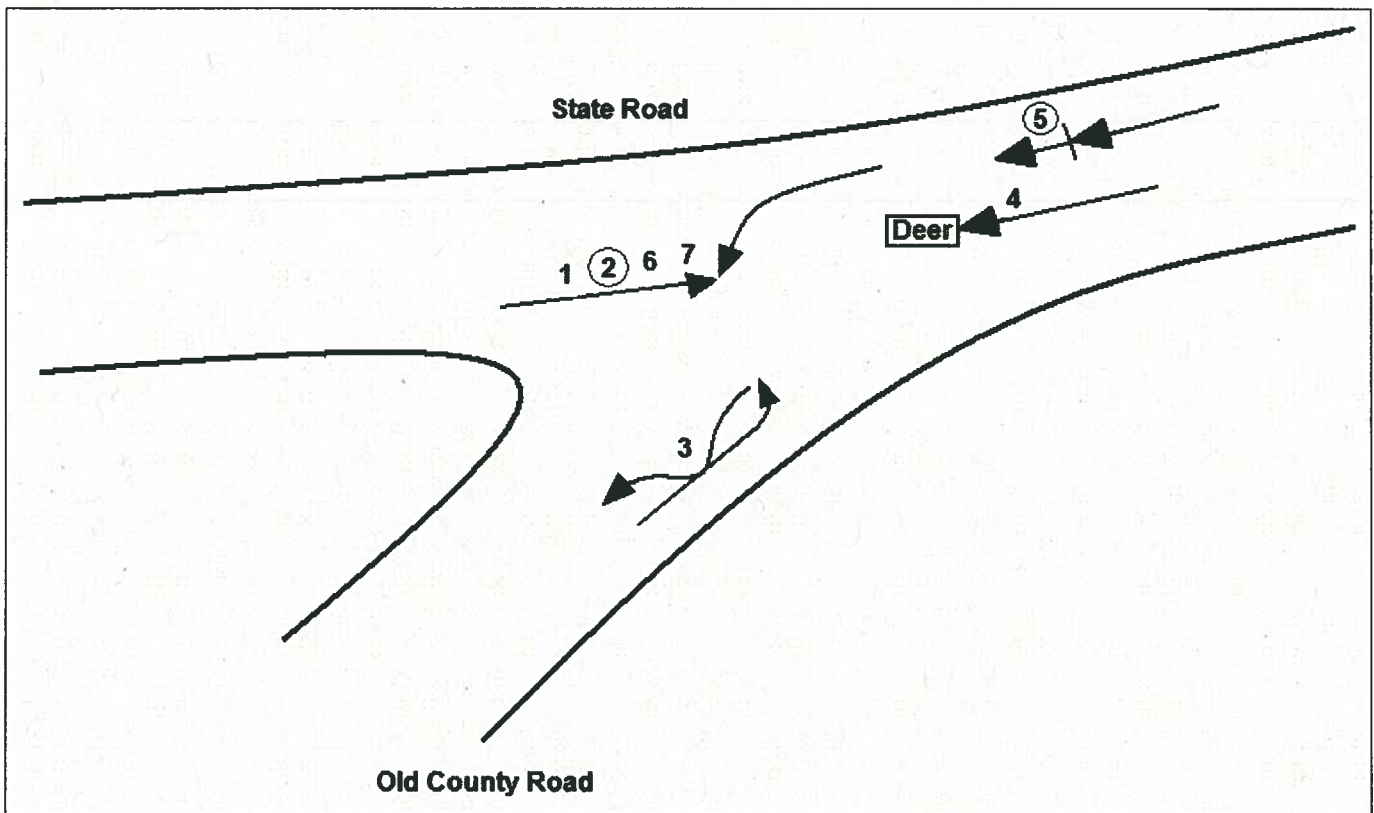
Image Taken from Martha's Vineyard Commission Staff
Re: Design Alternatives for the Intersection of State Road and Old County Road in West Tisbury; April 15, 2010.

Crash Data

January, 2005 - May, 2010

#	Crash Date	Crash Day	Time of Day	Manner of Collision	Light Condition	Weather	Surface	Contributing Code	Ages		Comments
1	5/19/10	Wednesday	2:03 PM	Angle	Daylight	Clear	Dry	Failed to yield to right of way			Left turn crash
2	12/30/09	Wednesday	12:21 PM	Angle							Left turn crash
3	8/26/09	Wednesday	9:27 PM	Sideswipe, opposite direction	Dark - lighted roadway	Clear	Dry	Made an improper turn	39	47	
4	1/28/08	Monday	6:23 PM	Single Vehicle Crash	Dark - lighted roadway	Clear	Dry	No Improper Driving	29		Deer
5	9/11/08	Thursday	3:04 PM	Rear-end	Daylight	Clear	Dry		16	27	Had lisenec for <6 months
6	1/27/07	Saturday	5:40 PM	Angle	Dark - lighted roadway	Cloudy	Wet	Failed to yield to right of way	43	50	Left turn crash, drunk driver
7	8/9/06	Wednesday	5:40 PM	Angle	Daylight	Clear	Dry	Failed to yield to right of way	60	41	Left turn crash

Collision Diagram

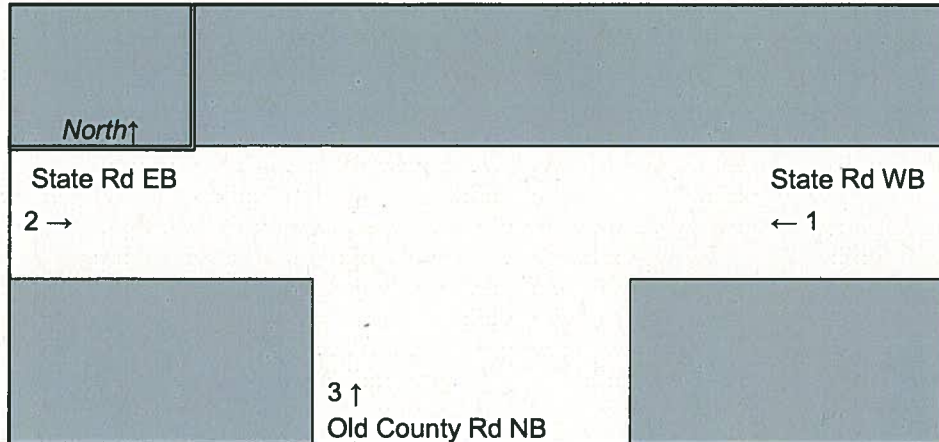


Crash Rate Worksheet

MAJOR STREET : State Road

MINOR STREET(S) : Old County Road

**INTERSECTION
DIAGRAM
(Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	West	East	North			
PEAK HOURLY VOLUMES (AM/PM) :	432	314	208			

"K" FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES : # OF YEARS : AVERAGE # OF CRASHES PER YEAR (A) :

CRASH RATE CALCULATION :

RATE = $(A * 1,000,000) / (V * 365)$

Appendix D. Speed Regulations

0.81 miles at 30 miles per hour
0.87 " " 35 " " "
1.11 " " 40 " " "
0.93 " " 35 " " "
1.02 " " 40 " " " to the West Tisbury

town line,

thence easterly in West Tisbury

0.15 miles at 40 miles per hour
0.84 " " 25 " " "
0.62 " " 40 " " "
0.24 " " 35 " " "
0.54 " " 30 " " "
2.96 " " 40 " " " to the Tisbury town line,

Thence easterly in Tisbury

0.80 miles at 40 miles per hour
1.07 " " 30 " " "
0.41 " " 20 " " "
0.44 " " 30 " " "
0.46 " " 40 " " " to the Oak Bluffs town line,

Thence easterly in Oak Bluffs

0.09 miles at 40 miles per hour
0.25 " " 35 " " "
0.39 " " 20 " " "
0.23 " " 35 " " "
0.23 " " 20 " " "
0.25 " " 35 " " "
0.43 " " 30 " " " to the end of State Highway.

And beginning again in Oak Bluffs at the beginning of State Highway,
thence easterly in Oak Bluffs

0.59 miles at 30 miles per hour
1.18 " " 35 " " "
1.19 " " 40 " " " to the Edgartown town line,

Thence easterly in Edgartown

1.86 miles at 40 miles per hour
0.38 " " 30 " " "
0.22 " " 25 " " " ending at the end of

State Highway; the total distance being 26.64 miles.

WESTBOUND - Main Street, Seaview Avenue, New York Avenue, Temahigan
Avenue, Eastville Avenue, Beach Road, South Main Street,
Vineyard Haven Road and South Road.

Beginning in Edgartown at the beginning of State Highway,
thence westerly

0.22 miles at 25 miles per hour
0.38 " " 30 " " "

1.86 miles at 40 miles per hour to the Oak Bluffs line,

Thence westerly in Oak Bluffs

1.19 miles at 40 miles per hour

1.18 " " 35 " " "

0.59 " " 30 " " " to the end of State

Highway.

And beginning again at the beginning of State Highway west of town,

Thence westerly in Oak Bluffs

0.43 miles at 30 miles per hour

0.25 " " 35 " " "

0.23 " " 20 " " "

0.23 " " 35 " " "

0.39 " " 20 " " "

0.25 " " 35 " " "

0.09 " " 40 " " " to the Tisbury town line,

Thence westerly in Tisbury

0.46 miles at 40 miles per hour

0.44 " " 30 " " "

0.41 " " 20 " " "

1.07 " " 30 " " "

0.80 " " 40 " " " to the West Tisbury town line,

Thence westerly in West Tisbury

2.96 miles at 40 miles per hour

0.54 " " 30 " " "

0.24 " " 35 " " "

0.62 " " 40 " " "

0.84 " " 25 " " "

0.15 " " 40 " " " to the Chilmark town line.

Thence westerly in Chilmark

1.02 miles at 40 miles per hour

0.93 " " 35 " " "

1.11 " " 40 " " "

0.87 " " 35 " " "

0.81 " " 30 " " "

0.23 " " 25 " " "

1.20 " " 35 " " "

1.31 " " 30 " " "

0.31 " " 35 " " " to the Gay Head town line,

Thence westerly in Gay Head

3.03 miles at 35 miles per hour

0.40 " " 20 " " " ending at the end of

State Highway; the total distance being 27.04 miles.

EASTBOUND - Edgartown Road and West Tisbury Road

Beginning 215 feet east of South Road,
thence easterly in West Tisbury

0.21	miles	at	25	miles	per	hour	
0.68	"	"	35	"	"	"	
2.31	"	"	45	"	"	"	
0.11	"	"	35	"	"	"	to the Edgartown town line,

Thence easterly in Edgartown

0.11	miles	at	35	miles	per	hour	
0.32	"	"	45	"	"	"	
0.10	"	"	35	"	"	"	
3.09	"	"	45	"	"	"	
0.87	"	"	35	"	"	"	
0.29	"	"	20	"	"	"	ending at the end of

State Highway; the total distance being 8.09 miles.

WESTBOUND - West Tisbury Road and Edgartown Road

Beginning 48 feet west of the beginning of State Highway,
thence westerly in Edgartown

0.28	miles	at	20	miles	per	hour	
0.87	"	"	35	"	"	"	
3.09	"	"	45	"	"	"	
0.10	"	"	35	"	"	"	
0.32	"	"	45	"	"	"	
0.11	"	"	35	"	"	"	to the West Tisbury town

line,

Thence westerly in West Tisbury

0.11	miles	at	35	miles	per	hour	
2.31	"	"	45	"	"	"	
0.68	"	"	35	"	"	"	
0.25	"	"	25	"	"	"	ending at South Road;

the total distance being 8.12 miles.

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate in any sense, Section 14 of Chapter 90.

The Department of Public Works and the Registrar of Motor Vehicles, acting jointly do hereby certify in writing, that this regulation is consistent with the public interest.

Standard signs must be erected at the beginning of each zone.

FOR THE DEPARTMENT

DATE: January 14, 1972

BY: Bruce Campbell
BRUCE CAMPBELL
COMMISSIONER

for Highway Engineering

David Lucey
Registrar of Motor Vehicles

February 24, 1970

TOWN OF WEST TISBURY
SPECIAL SPEED REGULATION NO. 475

Highway Location: WEST TISBURY
Authority In Control: TOWN OF WEST TISBURY
Name of Highway: Lambert's Cove Road, Indian Hill Road,
Old County Road ~~XXXXXXXXXXXX~~

In accordance with the provisions of Chapter 90, Section 18, of the General Laws (Ter. Ed.) as amended, the following Special Speed Regulation is

hereby adopted
by the Board of Selectmen
of the Town of West Tisbury

That the following speed limits are established at which motor vehicles may be operated in the areas described:

LAMBERTS COVE ROAD - NORTHBOUND

Beginning at North State Road,
thence northerly on Lamberts Cove Road,
0.77 miles at 30 miles per hour
0.90 " " 25 " " "
0.59 " " 30 " " "
0.59 " " 25 " " " ending at the Tisbury town
line, the total distance being 2.85 miles.

LAMBERTS COVE ROAD - SOUTHBOUND

Beginning at the Tisbury town line,
Thence southerly on Lamberts Cove Road,
0.59 miles at 25 miles per hour
0.59 " " 30 " " "
0.90 " " 25 " " "
0.77 " " 30 " " " ending at North State Road,
the total distance being 2.85 miles.

INDIAN HILL ROAD - NORTHBOUND

Beginning at South State Road,
Thence northerly on Indian Hill Road,

0.64	miles	at	30	miles	per	hour
0.30	"	"	25	"	"	"
0.47	"	"	30	"	"	"
0.35	"	"	25	"	"	"
0.09	"	"	15	"	"	"
0.27	"	"	25	"	"	"

ending at Norton Circle, the
total distance being 2.11 miles.

INDIAN HILL ROAD - SOUTHBOUND

Beginning at Norton Circle,
Thence southerly on Indian Hill Road,

0.27	miles	at	35	miles	per	hour
0.08	"	"	15	"	"	"
0.35	"	"	25	"	"	"
0.47	"	"	30	"	"	"
0.30	"	"	25	"	"	"
0.64	"	"	30	"	"	"

ending at South State Road, the
total distance being 2.11 miles.

OLD COUNTY ROAD - NORTHBOUND

Beginning at South State Road,
Thence northerly on Old County Road,

0.60	miles	at	35	miles	per	hour
2.80	"	"	45	"	"	"
0.11	"	"	25	"	"	"

ending at North State Road, the
total distance being 3.51 miles.

OLD COUNTY ROAD - SOUTHBOUND

Beginning at North State Road,
Thence southerly on Old County Road,

2.91	miles	at	45	miles	per	hour
0.50	"	"	35	"	"	"
0.10	"	"	25	"	"	"

ending at South State Road,
the total distance being 3.51 miles.

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate in any sense Chapter 90, Section 14, of the General Laws (Ter. Ed.).

Date of Passage 18 Feb. 1970

Everett D. P. [Signature]

Samuel [Signature]

Allen M. Look

Board of Selectmen

Attest Rene B. Hopkins
Town Clerk

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

SPECIAL SPEED REGULATION NO. 475

The Department of Public Works and the Registrar of Motor Vehicles, acting jointly, do hereby certify that this regulation is consistent with public interest.

Standard signs must be erected at the beginning of each zone.

Date: February 24, 1970

By: Edward J. Ribes
EDWARD J. RIBES
Commissioner

for Highway Engineering

Richard M. Laughlin
Registrar of Motor Vehicles

Speed Statistics

MPH	West Bound	East Bound	North Bound
0 - 5	0	0	0
5 - 10	6	8	3
10 - 15	17	59	53
15 - 20	72	157	132
20 - 25	221	215	494
25 - 30	1347	593	2474
30 - 35	10533	2823	6944
35 - 40	29828	14628	9045
40 - 45	15172	16221	6058
45 - 50	2071	4204	2790
50 - 55	229	513	782
55 - 60	28	74	146
60 - 65	8	13	35
65 - 70	3	3	12
70 - 75	1	3	3
75 - 80	1	0	5
80 - 85	2	0	2
Min	6.5	6.7	8.2
Max	83.5	74.8	82.9
Mean	38	40.1	37.6
85%	41.8	44.3	44.3

Speed Regulations:

East/West on State Road: 40 MPH

North on Old County Road within 0.11 miles of intersection: 25 MPH

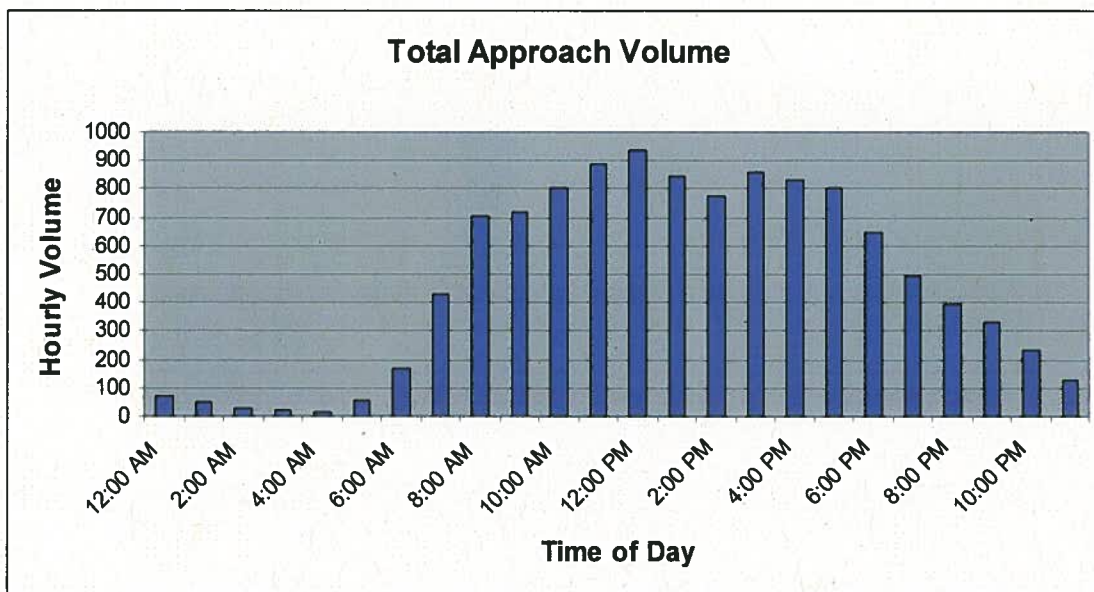
North on Old County Road outside of 0.11 miles of intersection: 45 MPH

Appendix E. Traffic Volume Data

Approach Volumes

Data Provided By MetroCount, Thursday July 23, 2009 – Wednesday July 29, 2009

Hour	West Bound		East Bound		North Bound		Total
	Volume	Percent	Volume	Percent	Volume	Percent	Volume
12:00 AM	34	49%	19	28%	16	23%	70
1:00 AM	29	61%	9	19%	10	20%	48
2:00 AM	15	53%	6	21%	7	25%	27
3:00 AM	7	39%	5	27%	6	34%	19
4:00 AM	3	25%	5	36%	5	39%	13
5:00 AM	19	33%	14	25%	24	42%	56
6:00 AM	59	35%	44	26%	65	39%	168
7:00 AM	191	44%	102	24%	138	32%	431
8:00 AM	314	45%	200	28%	190	27%	704
9:00 AM	310	43%	215	30%	194	27%	719
10:00 AM	356	44%	272	34%	172	21%	800
11:00 AM	407	46%	299	34%	182	20%	888
12:00 PM	442	47%	318	34%	179	19%	939
1:00 PM	391	46%	291	34%	164	19%	846
2:00 PM	377	49%	248	32%	149	19%	774
3:00 PM	373	44%	312	36%	172	20%	856
4:00 PM	373	45%	290	35%	171	21%	834
5:00 PM	376	47%	270	33%	160	20%	805
6:00 PM	291	45%	200	31%	158	24%	648
7:00 PM	230	47%	146	30%	115	23%	491
8:00 PM	187	48%	120	31%	84	21%	391
9:00 PM	186	56%	87	26%	60	18%	334
10:00 PM	138	59%	56	24%	39	17%	233
11:00 PM	74	59%	31	24%	21	17%	126
Total	5181	46%	3558	32%	2479	22%	11218

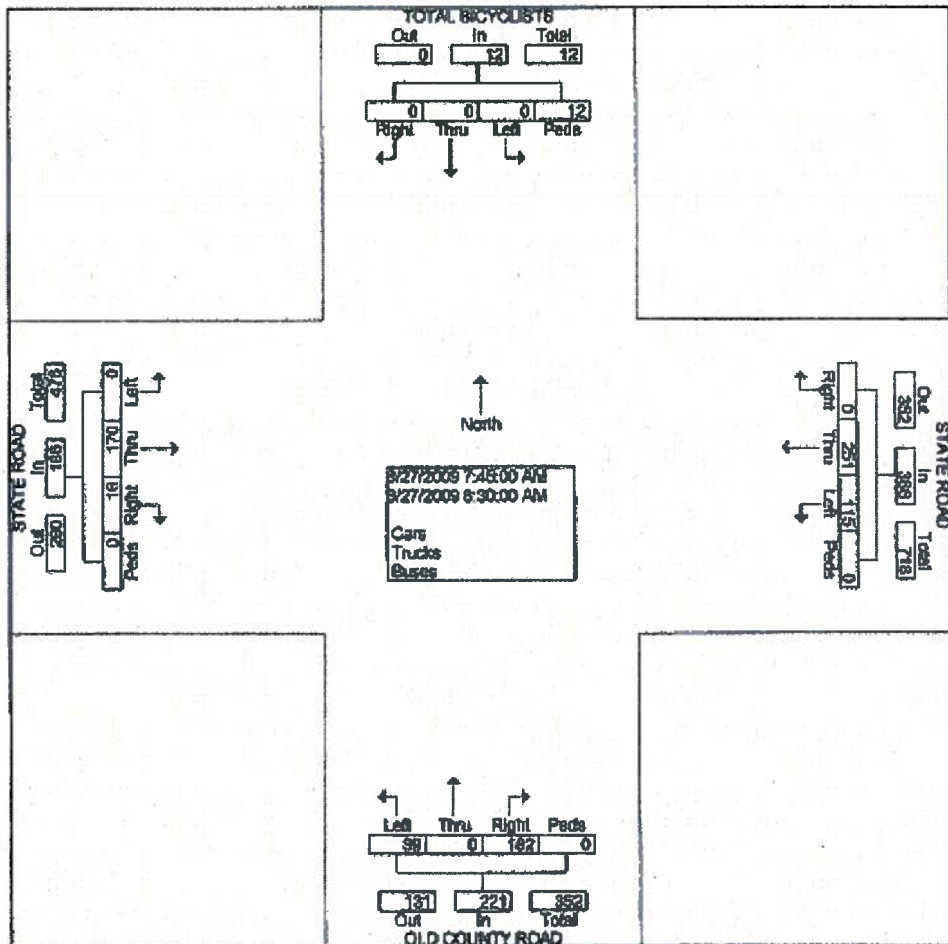


AM Peak Hour Movements

Martha's Vineyard Commission
 33 New York Avenue
 Oak Bluffs, MA 02557
 Traffic Data Collection

File Name : OLDCOU~1
 Site Code : 0000000
 Start Date : 08/27/2009
 Page No : 3

Start Time	TOTAL BICYCLISTS From North					STATE ROAD From East					OLD COUNTY ROAD From South					STATE ROAD From West					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	0	0	12	12	115	251	0	0	366	39	0	182	0	221	0	170	16	0	186	785
Percent	0.0	0.0	0.0	100.0		31.4	68.6	0.0	0.0		17.6	0.0	82.4	0.0		0.0	91.4	8.6	0.0		
07:45 Volume Peak Factor	0	0	0	3	3	26	72	0	0	98	20	0	44	0	64	0	44	6	0	50	215
High Int. Volume Peak Factor	0	0	0	4	4	27	75	0	0	102	20	0	44	0	64	0	52	6	0	58	0.913
					0.76					0.89					0.86					0.80	2
					0					7					3						

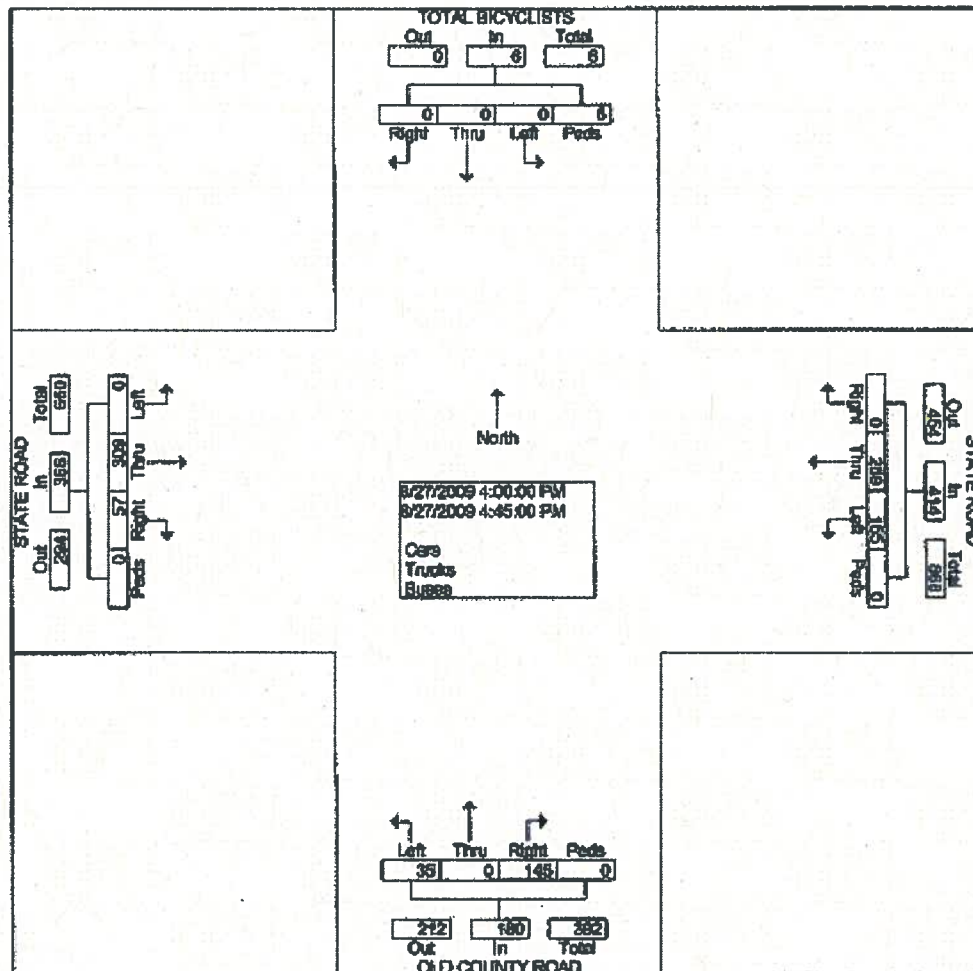


PM Peak Hour Movements

Martha's Vineyard Commission
 33 New York Avenue
 Oak Bluffs, MA 02557
 Traffic Data Collection

File Name : OLDCOU~2
 Site Code : 00000000
 Start Date : 08/27/2009
 Page No : 3

Start Time	TOTAL BICYCLISTS From North					STATE ROAD From East					OLD COUNTY ROAD From South					STATE ROAD From West					Int. Total					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total						
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																										
Intersection	04:00 PM																									
Volume	0	0	0	8	8	155	259	0	0	414	35	0	145	0	180	0	309	57	0	366	968					
Percent	0.0	0.0	0.0	100		37.	62.	0.0	0.0		19.	0.0	80.	0.0		0.0	84.	15.	0.0							
				0		4	8				4		8			4	6									
04:30 Volume	0	0	0	2	2	41	54	0	0	95	8	0	45	0	53	0	84	13	0	97	247					
Peak Factor																										
High Int. Volume	04:30 PM					04:00 PM					04:30 PM					04:30 PM										
Peak Factor	0					0.75					1					0.84					0.94					



Appendix F. Planning Board Letter



Town of West Tisbury
PLANNING BOARD
P. O. Box 278
West Tisbury, MA 02575-0278
508-696-0149
planningboard@westtisbury-ma.gov

July 12, 2010

Massachusetts Highway Department
10 Park Plaza, Suite 3510
Boston, MA 02116

Subject: Old County/State Roads Intersection

To Whom It May Concern:

Without in any way downplaying the necessity to address the configuration of this troublesome intersection I will note that IF one approaches it at a reasonable speed, stops at the stop sign on OCR and proceeds with due caution problems diminish to virtually nil. Visibility and site lines are good, the posted speed should be OK and there is a stop sign on Old County Road (OCR). I should note that I've made it a point to observe people's actions when approaching the intersection:

More than a few people do not stop at the stop sign on the OCR
Motorists routinely speed along that section of State Road
Motorists routinely cut across the road too early when they wish to enter OCR from State Road moving south
Signage indicating an impending dangerous intersection would help
Some police presence – monitoring speed and actions – would help. Our WT police used to park in the fire lane with good effect. I haven't seen them there recently
I've never seen any State Police there

Indeed, do the State Police patrol or are they only used for special details around utility trucks and the like? If they aren't doing routine speed and safety patrols why not? Aren't they paid no matter what they are doing?

This letter is to also bring to your attention other safety hazards – some of which are far more dangerous in my mind:

Crosswalks in many places all over the island, but most significantly between the parking area at Alleys Store and the Howes House/Library Parking lot in the center of WT need to be

repainted and marked. In many cases the lines across the road are completely erased/eroded away. Although one would think that speed through the center of town would be slow, it isn't and there are buses, lots of pedestrians, bicyclists, vehicles parking by large trucks whose drivers are stopping to get a cup of coffee, etc. This particular cross walk is a nightmare and a bad accident waiting to happen. As a Library Trustee I have repeatedly asked for relief – so far nothing has happened and I've never received a substantive reply. In Chilmark, Keith Emin has received permission to paint the crosswalk by the Police Station annually himself – after he notifies the appropriate authorities. How do we go about getting permission to do the same?

Signs have been permitted in off site locations along the State Road – e.g: the art gallery in Island Farm and the South Mountain Company sign near Stoney Hill Road. These signs sometimes block site lines, block the shoulders for pedestrians, and distract motorists as well as creating a visual blight. They should not be allowed either by the Town or by the Commonwealth. South Mountain actually has a totally unnecessary sign on the Woods Hole-Falmouth Road by the Woods Hole Research Center. Why have these been allowed for commercial enterprises?

Shrubbery and vegetation have grown up and out significantly and in some areas actually extend out into the traveled way. One place is by the former Littlefield House on State Road near the Polly Hill Arboretum. Others are near the ford in North Tisbury, and in lots of other places all over the island. Each summer the vegetation grows enough that bicyclists, joggers, pedestrians are forced onto the portion of the road reserved for vehicles. By the time any pruning takes place, it is usually in the fall when the bulk of the non-vehicular traffic has diminished.

The bridge at the Ford in North Tisbury is narrow and awkwardly configured – people DO NOT slow down approaching it and even try to pass bicyclists and pedestrians who are forced into the road there. The flimsy fence has to be repaired on a frequent basis. Why not realign the road and widen that bridge to allow a lane for bicyclists and pedestrians?

These are all items for which we are told there is no money, although they represent significant safety hazards and apparently state authorities are aware of them. By the way I have not included horseback riders in this letter although presumably I should. The reason is because no one rides their horse anymore although we used to routinely ride all over the island in relative safety 30 years ago.

By enforcing reasonable speed limits, constructing some bicycle paths, undertaking timely pruning, and placing signs and painting crosswalks, and by improving other opportunities for non vehicular traffic while making some adjustments in the traveled ways we could dramatically improve our roads – their safety for all users, as well as their aesthetics.

Thank you.

Virginia C. Jones ^{SA}

Virginia C. Jones
Chairman

Cc: Selectmen, Martha's Vineyard Commission