

**Village of Martin's Additions
Council Meeting
7013 B Brookville Road, Chevy Chase, MD 20815
Minutes of June 16, 2011**

COUNCIL MEMBERS AND VILLAGE REPRESENTATIVES PRESENT: Council Members: Richard Krajeck, Arthur Alexander, Jill Filipczyk, Chris Mueller, Mike Zielinski. Village Manager: Jean Sperling, Assistant Manager Deb Schmal. Mid-Atlantic Inspections: Tori Hall. Attorney: Ron Bolt. Village Traffic Engineer: Joseph Cutro, P.E.

RESIDENTS PRESENT: Keith Allen, Steve Schmal, Ted Stoddard, Hanne & Frank Correl, Michelle Bock, Lori Mitchell, Karan Capoor, Judy King, Gordon Thompson, Paul Iadarola, Bill Catherwood, Lynn Welle.

7:30 PM Call to Order: Richard Krajeck

TRAFFIC STUDY AND RECOMMENDATIONS-Joseph Cutro, P.E.

Cutro summarized the traffic study he performed for Shepherd Street and Cummings Lane in April, 2011. The complete study is attached to these minutes. He noted that there has been substantial growth in the volume of traffic, particularly on Cummings Lane, so that it now surpasses traffic volume on Shepherd Street. Speed does not appear to be a problem, although as volume increases the actual number of speeding cars increases—that is, volume creates its own speed problems.

Cutro pointed to the development in Bethesda to explain the increase. He believes that traffic is coming from Wise Road, across Chestnut Street (in the District of Columbia) to Camilier and Cummings. He speculated that the traffic is trying to get across Connecticut at the lights. Bradley Lane is likely bearing the most traffic.

In discussing options available for action on Cummings / Shepherd Street he identified the following possibilities for the Council:

- (1) Take no action.
- (2) Add speed deterrents that *might* affect volume in the following ways:
 - (a) Re-enforce speed controls, for example with an additional speed hump. This may have an impact on *future* traffic growth. Cutro noted that experience has shown that reinforcing speed controls are really a gamble in terms of their effectiveness in reducing speed and volume.
 - (b) Use chicane (curb bump-outs) strategies, but the consequences of such results in reduced parking.
 - (c) Turn Restrictions that include time and direction. Affects residents as well as cut-through traffic.
 - (d) Do not enter restrictions.

Residents Questions and Comments:

Several residents of the Village in attendance at the meeting asked questions of Mr. Cutro, including Karan Capoor (Cummings Lane), Lorie Mitchell (Cummings Lane), Hanne Correl (Turner Lane), Frank Correl (Turner Lane) Steve Schmal (Summit Ave), Michelle Bock (Shepherd Street), and Paul Iadarola (Shepherd Street) The answers are noted in bullet form:

- Cutro remarked that Cummings Lane is properly signed based on the Uniform Traffic Control Standards. The placement of additional signs (such as “children at Play”) is not likely to have an effect because after awhile signs fall into the background and people don’t see them. Additional sign provide clutter rather than effectiveness.
- In response to a question about visibility on the street and today’s distracted driving Cutro said that a combination of measures might be used to improve the one and reduce the other. However, he knew of no research that larger signs and painting on the street such would have any impact.
- Chicanes (curb bump outs) are effective for speed control but the loss of parking spaces can be very problematic. Cummings Lane presents a particular challenge because of its narrowness.
- While turn restrictions are often most effective, they cannot be selectively applied. Residents and non-residents must comply.
- Speeds in the 20 to 25 mph range are generally considered appropriate; Cutro would not recommend reducing the rate to 15 mph- it would have no effect on speed and it would not be enforceable. Speed limits are not just arbitrarily set—state law requires that an engineer must certify prevailing speeds and physical conditions to set the speed limits.

- The speed bumps on Cummings and Shepherd cannot be made higher because the height is limited by national standards and the current humps meet those standards. There is no other speed hump design that would be more effective and still be acceptable. The “log-type” of speed hump is not a part of the national guidelines and they would expose the Village to liability issues.
- Action on Cummings Lane will necessitate action on Shepherd Street so that traffic is simply not diverted to the other street.
- Cutro did not know of a way that a street path could be removed from Map Quest.
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Questions from Council Members:

The following information was provided by Cutro in response to questions from the Council:

- Additional speed humps on Shepherd and Cummings would not provide any significant changes in traffic; however, while additional speed humps may not be required, they would do no harm.
- Ranking the possible action on the basis of effectiveness it would be (1) turn controls, (2) chicanes, and (3) speed humps.
- Speed enforcement is traditionally set at 12 mph over the speed limit. In order to get enforcement of the speeds we saw in the traffic study the police would have to lower their tolerance for citations, which is highly unlikely.
- One-way streets would certainly change the traffic patterns, but one-way streets often result in higher traffic speeds.
- Temporary stanchions might provide a better way to hold up traffic on a street as narrow as Cummings, without have a detrimental impact on parking—speeds can be reduced by moving traffic back and forth
- There are ways of testing the effectiveness of different traffic controls.

BUILDING ADMINISTRATOR’S REPORT: Victoria (Tori) Hall, Mid-Atlantic Inspections

Projects Completed:

- Shepherd Street, 3421 (Browder) addition and interior renovations. Bond return request being processed
- Quincy and Oxford Street Sump Pump Connection Completed
-125 Quincy -118 Quincy-203 Oxford

New Construction Permits In Process:

- 3503 Bradley Lane Tear down and all new construction. All fees received. Awaiting Permit from the County. Martin’s Additions pre-construction meeting to be scheduled shortly.
- Thornapple Street, 3401 (Legarreta): remodeling, rear addition, interior remodeling. Plans have been approved for rear breakfast room and lifting of the roof. Problem with side lot lines on Summit Avenue. That portion of the project was denied.

Permit Requests Under Consideration

- Cummings Lane, 3506 Gillespie; rear deck

Project Ongoing:

- Brookville Rd, 6807; Addition
- Chestnut Street, 7216; New Home.
- Delfield Street 7315 (Kirsch). Work is progressing should be completed soon.
- Other projects receiving supervision in the Village are:
-3502 Cummings Lane (Patterson), -7404 Summit Ave. (Brotman)

Other projects supported by Mid-Atlantic:

- Development of a variance application
- Oversight and Documentation of Home Business complaint-Issued resolved.
- WSSC water main explosion on Summit Ave, Emergency action
- Raymond Street sewer line problem and Rats; Raymond Street sewer replacement
- Delfield Street Sink-hole documentation and notice.
- Participation in walk through with WSSC engineers for planned water main replacement from Cummings Lane to North end. Weekly oversight and documentation of in-village projects.
- Oversight of Sewer line video work
- Oversight and documentation of Brookville Road repaving; assistance with complaints and general supervision.
- Dead end Bradley excavation and resident concerns about water run off
- No Parking posted as needed for tree work, paving work and sewer emergencies

Continued Examination of Construction Data for Building Fee Revision Considerations: On Hold

FINANCIAL MATTERS

- **Financial Report for the Month of May: Arthur Alexander**

July 2010-May 2011

	<u>Actual</u>	<u>Budgeted</u>
Revenues	\$483,119	471,429
Expenses	354,258	433,417
Net Income	128,861	38,012

Reserve account: \$1,080,191

As expected, income tax receipts in May brought the Village's income close to the forecast amount with only one month left in the fiscal year. Expenditures are running below budget by almost 20%. Lower office expenses, professional fees, and street maintenance account for the much of the lower expenditures. However, tree replacement and maintenance expenses have been incurred, and additional tree removals and replacements are planned in coming weeks. The reserve account is roughly 1.5 times the average annual expenditures over the past three years, giving us a cushion against unexpected occurrences and a source for needed capital investments.

Motion to Adopt Treasurer's Report and All Supporting Financial Reports: Mueller; 2nd Filipczyk; Vote: All in Favor

- **FY 2011 Budget Amendments**

As the fiscal year nears its end, several budget items will have to be increased to bring consistency to already approved expenditures. These items reflect, among other things, increased spending on tree maintenance and replacement as well as higher fuel costs for waste collection services. (A detailed list is attached.) Since other categories have been running below planned amounts, there are funds available in the current budget to cover the increases without taking money from the reserve account.

The following budget categories need supplemental funds of \$28,000 as shown:

Trees Maintenance: \$15,000, Tree Planting: \$2,000, Salaries: \$6,000, Building and Permitting: \$5,000

Funds are available for redirection from budget categories as follows:

Printing and Mailing: \$5,000; Street Maintenance: \$10,000; Snow Shoveling: \$3,500; Snow Plowing: \$1,500; Leaf Bags: \$2,000; Urban Planner: \$8,000, for a total of \$30,000 available for redirection between budget categories. Total -\$30,000

Motion to Amend the FY 2011 budget as described by redirecting funds from within the budget: Alexander; 2nd Zielinski; Vote: All in favor

- **Acceptance of Auditors Contract Letter for FY 2011**

The auditor's contract letter for the FY 2011 audit has been received by the Village. The audit cost is \$5,200.

Motion to accept the offer to perform an audit of the FY 2011 budget by LSWG: Alexander; 2nd Zielinski; Vote: All in favor.

ACTION ON MINUTES May 12, 2011 Annual Meeting

Motion to Confirm Approval of Minutes: Filipczyk; 2nd Alexander; Vote: All in Favor

DEBRIS MANAGEMENT MOU WITH COUNTY Discussion and Resolution 6-11-1

Manager Sperling explained that Montgomery County has offered all the municipalities in the County, including Martin's Additions, the opportunity to partner with them in their FEMA approved debris management plan that identifies the procedures, resources and facilities involved in performing debris clean up after a severe weather event such as a hurricane. The County has also established contracts with three emergency debris management contractors with extensive equipment resources and a specialized monitoring contractor (to document activities for FEMA reimbursements. These resources will be available to all participants at a reasonable cost. Sperling attended an all-day workshop put on by the county explaining the process and procedures related to the MOU. She recommended that the Council approve the Memorandum of Understanding (MOU) described in Resolution 6-11-1.

Motion to adopt Resolution 6-11-1 to enter into an agreement with the county: Filipczyk; 2nd Alexander. Vote: All in favor.

MANAGER'S REPORT

Street and/or Utility Services:

- WSSC is currently designing the engineering plans for water main restoration on the Village streets from Cummings Lane through Delfield Street. Sperling and Fowler (MAI) walked through the town with the engineers to discuss the plans. Video of sewer lines is also being done. Upgrades may be made to both sewer and water lines. Opening the streets may provide an opportunity for storm drain repair on dead-end Delfield.
- Water Main blew out in same spot on Summit Ave. Water had to be shut off for the repair to be made.
- Sewer problems on Raymond Street having to do with rats- new laterals placed.
- Pepco Work includes major power pole, transformer and line replacements to occur through the north end of the Village as a part of PEPCO'S reliability plan. The PEPCO engineer's report was recently received. This is in addition to new poles and lines on Cummings and Brookville. Scott Watson, the Village's street lighting consultant reviewed the PEPCO plans to see if there are any changes that would benefit the lighting plan he had developed for us.
- Repaving of Brookville Road is complete except for re-painting of the lines

Service Deliver/ Maintenance

- Tree Report: 5 new trees planted; Gator-bags have been placed on trees; watering has begun. Two ROW areas sprayed to clear weeds -Corner Cummings & Brookville / Melville & Raymond; Stumps left from the PEPCO tree removals on public property have all removed, areas (with one exception)cleaned and seeded in the north end.
- Pepco Plan for tree trimming in mid-section: Pepco's arborists, (John Eide and Ron Muir), Paul Wolfe, the Village's arborist, Dan Gardner and Manager Sperling walked the streets and reviewed the planned tree work. The work was scheduled to start in mid- May but new PSC rules will delay the work.
- Pepco completed the tree work on Quincy Street. The work planned for Quincy was also reviewed by the same group prior to execution.

Administrative Work/Issues

- Bethesda Business Services, our printer of 30 years, is going out of business. We will have to find a new printer quickly.
- Variance application form is finished and approved by the Council.
- Local Government Insurance Trust (LGIT) representative met with the Manager again to review the final plans for VMA join LGIT
- MML has offered VMA a scholarship to the convention in Ocean City. Manager Sperling will go.

INSURANCE CHANGE-LGIT PROPOSAL: Resolution 6-11-2

Motion to accept Resolution 6-11-2 to approve and accept the eighth amended and restated Trust Agreement of the Local Government Insurance Trust and to direct the VMA Chairman to submit a letter to the Board of Trustees of LGIT requesting membership for the Village of Martin's Additions, effective July 1: Mueller; 2nd Alexander; Vote: All in Favor.

FY 2012 TRASH CONTRACT

Sperling recommended that the Council approve a renewal of the Waste Management contract. There is no change in current year's rate or services. The rate is firm excluding documented landfill fee increases, fuel charges or changes in law. Attorney Bolt recommended that the Village use the standard contract recommended by his firm, with the Waste Management contract as an attached exhibit.

Motion to approve the extension of the Waste Management Contract for FY 2012 at the present rate: Zielinski; 2nd Mueller; Vote: All in favor.

DISCUSSION OF RIGHT OF WAY ACCESS/OBSTACLES-DEFERRED UNTIL NEXT MONTH

10:00 PM ADJOURNMENT

May 15, 2011

Revised May 31, 2011

TO: Jean Sperling, Manager, Village of Martin's Additions
FROM: Joseph Cutro, P.E., Traffic Engineering Consultant
SUBJECT: **Cummings Lane and Shepherd Street –
Summary and Analysis of Traffic Counts**

Per your direction, I have completed collection and analysis of traffic volume and speed data on the two subject residential streets. Data was collected for six full days at two locations on each street (four sites total) using automatic recorders manufactured by MetroCount. These portable roadside units collected time-stamped data about the passage, direction, speed, and classification (by number of axles) of individual vehicles. The collected data were then broken down by selected time increments using MetroCount's *Traffic Executive* computer program.

Cummings Lane

The recorders were placed at roughly the 1/3 points between Brennon Lane and Brookville Road, at locations where each roadside unit could be securely locked to a utility pole. For the eastern site, located well within the limits of Martin's Additions, data was collected for a six-day period beginning at 12 midnight Monday April 4, and ending about 11:00 AM on Sunday April 10. For the western site, data collection began just before noon on Sunday April 10, ending at midnight on Sunday April 17.

Weighing both sites, composite Average Daily Weekday Traffic (ADWT) on Cummings Lane can be stated at 850 vehicles per day, making it Martin's Additions' most-heavily traveled street at this time. Saturday traffic is about 750 vehicles per day. Available historical data, although quite sparse, indicates that ADWT has risen by about 300 (*A 2-day count from 1975, however, shows an ADWT of 900). since the early 1990's. Given the area's generally stable land use over the intervening period, it is probable that much of the increase can be attributed to external-external (cut-through) traffic.

While one would expect total traffic flow at the western site to be somewhat (5-10%) greater, the difference in volumes between the sites was unexpectedly high. Volume at the western site in the second week was found to be a full 25% greater than the first week's volume at the eastern site. Most of the apparent discrepancy can be explained by road and utility construction in the area, primarily along Brookeville Road. Note for example, the nearly complete shutdown of traffic for several hours in the afternoon of April 6, during which, by the way, weather conditions were excellent.

Relative to most residential streets, and somewhat uncharacteristic of cut-through traffic, weekday peak hours on Cummings Lane are not particularly pronounced. In the morning, the peak hour consistently starts at 8 AM, with hourly volume of about 80 vehicles. The evening peak hour is less predictable, with the highest hour starting as early as 4 PM and as late as 6 PM. The evening peak hour averages about 75 vehicles in both directions. The daily (in this case, morning) peak hour represents about 9% of the daily volume – not very “spiky” and somewhat less than the 10% typically seen of residential streets. On weekends, the peak hour falls in the middle of the day, again typical of residential streets. Saturday's peak hourly volume of about 65 can occur in any hour between 10 AM and 2 PM.

Directional flows on Cummings Lane appear to be almost dead-evenly balanced over each day and the full week. On weekday mornings, however, traffic shows a definite westbound bias, with about 2/3 of traffic heading toward Brookville Road during the 8-9 AM peak hour. The situation reverses itself in the evening, with the westbound split dropping to about 42% in the peak hour.

The table below summarizes vehicle speed characteristics found on Cummings Lane over the 6-day sample periods. To de-emphasize the effect of speed humps and topography, the speed statistics selected to represent the entire street have been taken only from the eastern site, for which the speed numbers are slightly higher. The speed measures noted are the 50th percentile, or *median* speed—the middle value of the collected sample. It is close to, but not the same as the *average* (or mean) speed. A more important indicator for traffic engineers and enforcement officers is the 85th percentile speed. This is the speed exceeded by 15 percent of the vehicle sample, and is considered to be the best single-number representation of the prevailing speed of traffic. Ideally, speed limits are set at the 5 mph increment below the computed 85th percentile speed. The table also

includes a 95th percentile speed and a maximum recorded speed to help define the extreme upper range of the speed distribution, along with a comparison of the vehicle sample with the existing speed limit (20 mph).

CUMMINGS LANE TRAFFIC SPEED SUMMARY

	50 th %-ile (mph)	85 th %-ile (mph)	95 th %-ile (mph)	Max observed	% exceeding speed limit (20 mph)
Total	20.4	24.2	26.6	36.1	53%
Eastbound	20.4	24.4			
Westbound	20.1	23.9			

The limited historical data available would seem to suggest that speed humps have been effective in reducing speeds on the street. Assuming a coincident mean and median (50th percentile), median speeds appear to have dropped by about 3 mph.

There appear to be no unusual hourly variations in the speed data. The highest prevailing speeds occur between 2 and 4 PM, when driving conditions tend to be less impeded than in the peak hours. As might be expected, a few spikes and troughs were seen in the overnight hours, as much the product of tiny hourly sample numbers as they are of occasional late-night speeding incidents.

The classification data showed very few vehicles having more than 2 axles. For both directions of travel on Cummings Lane, vehicle or vehicle combinations of 3 axles or more constituted less than 1% of the traffic volume over the full 6-day sampling period.

Shepherd Street

Like Cummings Lane, the recorders were placed at approximate 1/3 points between Brennon Lane and Brookville Road. Data was collected at the eastern site, located well within the limits of Martin’s Additions, for a six-day period beginning at 12 midnight Monday April 4, and ending about 11:00 AM on Sunday April 10. Data was collected at the western site starting at noon on Sunday April 10, and ending at midnight on Sunday April 17. As expected, total traffic volume at the western site was slightly higher, influenced by proximity to Brookville Road.

Composite Average Daily Weekday Traffic (ADWT) on Shepherd Street can be stated at 750 vehicles per day, probably making it Martin’s Additions’ second most-heavily traveled street. Saturday traffic volume on Shepherd drops to about 650 vehicles per day. Available historical data shows an ADWT in the early 1990’s of about 650, indicating that Shepherd had once been the Village’s highest-volume street, which was probably so for many years. Like Cummings, much of the 100-vehicle increase in traffic volume over the intervening years can be attributed to cut-through traffic.

Similar to Cummings Lane, volume in the morning peak period is somewhat blunted. The morning peak hour consistently starts at 8:00 AM, and with volume of about 65, represents about 8% of daily volume. In contrast, the evening peak hour is much more pronounced. Volume averages about 85 vehicles (11% of ADWT), spiking to as high as 137 vehicles (April 11 between 5 and 6 PM). Unlike in the morning, the evening peak hour tends to drift over a 3-hour window (4-7 PM) throughout the week. On Saturday, there is no clear peak over the course of the day, with the actual maximum hour beginning at any time from 9:00 AM to 6:00 PM. The typical Saturday peak hour volume appears to be about 70 vehicles, but can vary greatly.

Directional flows are well-balanced over each day, including Saturday, as well as the entire week. As might be expected, the weekday morning peak hour shows a clear directional bias with a 62% westbound split – not quite as pronounced as that on Cummings, but significant nevertheless. Surprisingly, however, directional traffic flows in the evening peak period are almost evenly balanced.

The table below summarizes vehicle speed characteristics found on Shepherd Street over the 6-day sample period. For a discussion of the speed statistics listed, see the paragraph preceding a similar table for Cummings Lane.

SHEPHERD STREET TRAFFIC SPEED SUMMARY

	50 th %-ile (mph)	85 th %-ile (mph)	95 th %-ile (mph)	Max observed	% exceeding speed limit (20 mph)
Total	18.6	22.6	24.8	31.2	36%
Eastbound	18.6	22.4			

Westbound 18.3 22.8

Historical speed data for Shepherd Street is rather inconsistent, making comparison with today's conditions difficult. Nevertheless, it would appear that speeds have declined somewhat since the early 1990's, with the median speed dropping by about 2.5 mph.

There appear to be no unusual hourly variations in the speed data. Slight upticks in prevailing speeds appear to occur during the morning peak period (6 to 9 AM) and later evening from 8 to 10 PM.

The classification data showed even fewer vehicles than on Cummings Lane as having more than 2 axles. The data indicates about 30 vehicles per week in that category, constituting about ½ % of the street's total volume.

Conclusions and Recommendations

Daily traffic volumes on both Cummings Lane and Shepherd Street, while not unusually high in an absolute sense, are among the highest seen on secondary residential streets in the area. See Appendix 1.

Cummings Lane has now become the Village's busiest (local) street. What's more significant is the circa 50% growth in traffic flow over the last 20 years, an increase that can deservedly be regarded as problematic. Traffic on Shepherd Street has also increased, but at a slower pace (about 15%), over the same period.

These increases in traffic flow have probably occurred gradually or at least in a series of steps. A likely underlying cause is continued development in the southern end of the Bethesda business district. Cummings and Shepherd have become part of an east-west conduit serving that area, in combination with (primary level) Chestnut Street in the District of Columbia, Western Avenue, and Bradley Lane and Raymond Street west of Brookville Road. The key intersections in this path are Connecticut/Bradley and Connecticut/Raymond/Rosemary, where the only traffic signals between the District line and East-West Highway provide safe and relatively convenient crossings of Connecticut Avenue. It is also possible that alterations in the street system (e.g., a new turn restriction in the District) have influenced traffic flow on Cummings Lane and Shepherd Street.

Speeds on both streets appear to be very much under control, and the data suggests that there is no need for further speed mitigation measures. The speed humps installed on both streets seem to have maintained their intended effect over the years. As described below, however, further countermeasures intended primarily as speed controls could serve as mild deterrents to increasing traffic *volume*.

While no countermeasures to volume growth on Cummings and Shepherd can be recommended unequivocally, a number of possible remedies are available. The most cost-effective strategy would be turn and entry restriction signs, effective either full-time or during peak period(s) only. One example of such a strategy might be signs reading No Right Turn (symbol), 4-6 PM, MON-FRI on northbound Brookville Road at both Cummings Lane and Shepherd Street. Such restrictions, however, come with a number of caveats. Firstly, any turn/entry restriction strategy of this kind is obviously a double-edged sword, making access to and from local properties more difficult and inconvenient (exceptions for "local residents only" are not legal on public streets). It follows that to initiate such a strategy, a broad consensus of local residents would be needed, including input from residents living outside of Martin's Additions as far east as Western Avenue.

A second consideration is that restrictions should not be established on/for Cummings or Shepherd alone - complementary signing is needed to prevent a shift in the traffic flow problem from one street to the other.

Another consideration is the role of other jurisdictions. On its own, Martin's Additions would be able to affect traffic flow only with restriction signs placed at Brookville Road intersections (for which *pro forma* SHA approval would be required). Any effort to control traffic flow at or beyond the Village's eastern limits would have to be initiated and fully supported by Montgomery County government, and that is not likely. Daily and peak hour traffic volumes on both Cummings Lane and Shepherd Street fail to meet the required thresholds (1000 ADWT, 100 hourly) of Montgomery County's residential traffic calming program. (Note, however, that County guidelines contain no threshold for volume change or growth). Fortunately, the County does not have jurisdiction over locations/intersections along Brookville Road within municipal boundaries.

An entirely different tack that could be taken is the installation of further speed control measures as a means of deterring traffic volume. This could be something as simple as adding another speed hump on each block, or more ambitiously, creating travel path "chicanes" with a series of curb bumpouts or chokers. Because their influence on volume is likely to be slight at best, none of these measures can be specifically recommended.

On the plus side, however, speed control would be further reinforced, and the consensus area required for these alternatives could be pretty much contained within the boundaries of Martin's Additions. The chokers can also provide an attractive streetscape opportunity, although the existing narrow street widths would not allow such treatment without extensive loss of on-street parking. Furthermore, choker installation can present some serious challenges to/for surface drainage. Choker/chicane treatment also happens to be an expensive proposition, with cost for the entire length of either Cummings Lane or Shepherd Street estimated at about \$80,000. In contrast, new speed humps cost about \$3,000 each, although if new ones were added, the existing pair on each street would likely have to be moved for optimal speed control. Total cost for each street, including demolition of the old humps and relocation of all signs, would be about \$12,000.

Appendix 1:

Martin's Additions - Comparative Traffic Volumes
(Average Daily Weekday Traffic)

Connecticut Avenue, south of E-W Highway	48,000	est.
East-West Highway, east of Connecticut Ave.	30,000	est.
Bradley Lane, west of Connecticut Ave.	12,000	est.
Brookville Road, vicinity Cummings/Shepherd	10,000	est.
Bradley Lane, Connecticut to Brookville (Section 3)	1,500	est.
Leland Street, Connecticut to Brookville (Section 5)	1,200	(2007)
Cummings Lane, east of Brookville Road (VOMA)	850	(2011)
Shepherd Street, east of Brookville Road (VOMA)	750	(2011)
Thornapple Street, east of Brookville (Section 5/VOMA)	750	(2007)
Thornapple Street, Connecticut to Brookville (Section 5)	450	(2007)
Woodbine Street, Connecticut to Brookville (Section 5)	450	(2007)
Underwood Street, Connecticut to Brookville (Section 5)	400	(2007)
Quincy Street, east of Brookville Road (VOMA)	300	(2007)
Raymond Street, east of Brookville Road (VOMA)	300	(2007)
Chestnut Street, Thornapple to Taylor (VOMA)	300	(2007)
Summit Avenue, Thornapple to Taylor (VOMA)	300	(2007)
Williams Street, Connecticut to Brookville (Section 5)	250	(2007)
Bradley Lane, east of Connecticut Avenue (VOMA)	200	(2007)
Delfield Street, Thornapple to Taylor (VOMA)	200	(2007)