

# MADISON AVENUE TRAFFIC STUDY/ ROAD DIET FEASIBILITY STUDY



FINAL REPORT: JUNE 2013



Option A: Shared Travel Lane



Option B: Shared Parking Lane



Option C: Exclusive Bike Lane

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## Executive Summary

The City of Albany commenced a study to evaluate the feasibility of implementing a "Road Diet" along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. A "Road Diet" is when a road is reduced in the number of travel lanes and/or the effective width. The reallocation of space can result in improved safety for cyclists by providing dedicated space on the roadway; for pedestrians by reducing the potential vehicle conflicts; and for vehicles by providing clear delineation and fewer decision points.

The goals of the study are to provide an assessment of the feasibility, benefits, and impacts of a road diet in the corridor by evaluating alternatives that consider bicycles, pedestrians, transit, parking, safety, and passenger vehicle operations. In addition, the alternatives should strive to maintain the existing curb lines, allow sufficient opportunities for turning vehicles, and maintain parking on both sides of Madison Avenue.

There are multiple design options for implementation of a road diet that would accommodate cyclists, motorists, and parked vehicles. However, two alternatives are considered "not feasible" including implementation of a cycle track which would require curb relocation and providing a two-lane roadway which does not provide a lane for turning traffic. Therefore, the study focuses on the following five (5) alternatives to determine feasible road diet alternatives.

- Alternative 1: Existing roadway configuration and planned signal improvements
- Alternative 2: 3-lane roadway through entire corridor <u>without</u> signal coordination
- Alternative 3: 3-lane roadway through entire corridor with signal coordination
- Alternative 4: 3-lane roadway along Madison Avenue without signal coordination
- Alternative 5: 3-lane roadway along Madison Avenue with signal coordination

The analysis shows that Implementation of a Road Diet just along the Madison Avenue portion of the corridor with no signal coordination (Alternative 4) may be feasible, however, increased vehicle delays will be apparent. Including signal coordination in the project (Alternative 5) minimizes adverse impacts and brings vehicle delays closer to existing conditions. Alternative 5 is considered feasible. Alternatives 2 and 3 (road diet extending onto Western Avenue) are not feasible due to the sheer traffic volume and delays that would result from a road diet in this section.

There are three general roadway layout options for a road diet on Madison Avenue:

- Option A: Shared Travel Lane for bicycles and vehicles.
- Option B: Shared Parking Lane in which there is a wide parking lane for bicycles and parked vehicles.
- Option C: Exclusive Bike Lane in which vehicles, bicycles, and parked vehicles each have delineated space.

The following images illustrate how the three roadway layout options could look on Madison Avenue. Although all three of these options appear feasible, Options B and C would require some concession on desirable lane widths (center turn lane should be 11 feet wide and the parking lanes should be 8 feet wide).

None of the three options meet all of the stakeholder goals, but are deemed to provide adequate bicycle accommodation on this roadway. Option A is consistent with recent pavement marking projects throughout the City with the use of Sharrows to indicate that cyclists share the travel lane with motorized vehicles. Option B shifts the bicycle accommodation into a shared parking lane, separating the bicycles from the travel lane but placing them against parked vehicles. Option C provides for exclusive delineated bicycle lanes but again places bicyclists against parked vehicles.



Option A: Shared Travel Lane

Option B: Shared Parking Lane

Option C: Exclusive Bike Lane

In conclusion, it appears that a Road Diet is feasible for Madison Avenue with the following potential trade-offs:

Potential Advantages	Potential Disadvantages
Space for bicycles	Increased vehicular delay, notably side street
	approaches
Traffic calming / reduced travel speeds.	More difficulty turning in and out of driveways
Less traffic noise	Increased transit travel times
Crash reduction	Greater interference of double parked vehicles

In order to implement Alternative 5 on Madison Avenue, pavement marking modifications as well as traffic signal improvements to incorporate vehicle detection and coordination equipment will be required.

## Chapter 1. Introduction

The City of Albany has commenced a study to evaluate the feasibility of implementing a "Road Diet" along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. A "Road Diet" is when a road is reduced in the number of travel lanes and/or the effective width. The goals of the study are to provide an assessment of the feasibility, benefits, and impacts of a road diet in the corridor by evaluating alternatives that consider bicycles, pedestrians, transit, parking, safety, and passenger vehicle operations. The study area is illustrated on the map below and includes the following signalized intersections (listed from west to east):

- Western Ave/Manning Blvd
- Western Ave/North-South Pine Ave
- Western Ave/North-South Allen St
- Madison Ave/West Lawrence St
- Madison Ave/North-South Main Ave
- Madison Ave/St. Rose pedestrian signal
- Madison Ave/Partridge St

- Madison Ave/Ontario St
- Madison Ave/Quail St
- Madison Ave/North-South Lake Ave
- Madison Ave/Robin St
- Madison Ave/New Scotland Ave
- Madison Ave/Willett St
- Madison Ave/Lark St



The City of Albany completed a Bicycle Master Plan in December 2009 with the stated purpose to "identify a network of bicycle routes to improve cycling as a viable mode of transportation throughout the City<sup>1</sup>." The plan identifies Madison Avenue as a "Major Bikeway" intended for adult riders that can use the road for direct route commuting purposes. However, with its current configuration of two travel lanes in each direction, the existing roadway geometry cannot function as a major bikeway in the City.

The U.S. Department of Transportation Federal Highway Administration (FHWA) provides information about Road Diets, and notes that typical road diets involve the reallocation of four travel lanes (two in each direction) to one travel lane in each direction with a center two-way left-turn lane as shown in the following pictures from the FHWA website.

<sup>&</sup>lt;sup>1</sup> City of Albany, Planning Department, <u>City of Albany Bicycle Master Plan</u> (Albany: Planning Department, 2009)



The reallocation of space can result in improved safety for cyclists by providing them dedicated space on the roadway; for pedestrians by reducing the potential vehicle conflicts; and for vehicles by providing clear delineation and fewer decision points. Within the study corridor, there are a number of potential benefits associated with the potential implementation of a road diet. Table 1.1 identifies the benefits as listed in the *Guide for the Development of Bicycle Facilities 2012, fourth edition* as published by the American Association of State Highway and Transportation Officials.

### Table 1.1 – Road Diet Benefits

AASHTO Bicycle Facility Road Diet Benefits
The additional space gained by removing one lane can be used to provide bike lanes or shoulders on
both sides of the road.
With one travel lane in each direction, top-end travel speeds are moderated by those who are following
posted speed limits, which may reduce potential crash severities for all users.
It may be feasible to include a raised median or small refuge islands at some pedestrian crossing
locations, making it easier for pedestrians to cross the street and reducing the likelihood of pedestrian
crashes.
The reduction from two lanes to one in each direction virtually eliminates the likelihood of "multiple
threat" crashes (where a driver in one lane stops to yield, but the driver in the adjacent lane continues
at speed) for pedestrians and left-turning motorists and bicyclists.
Left-turn lanes provide a place for motorists and bicyclists to wait to make a left turn, reducing the
incidence of left-turn and rear-end crashes.
Sideswipe crashes are reduced since motorists no longer need to change lanes to pass a vehicle
waiting to turn left from the leftmost through lane.
Less traffic noise (due to reduced speeds) and greater separation from traffic for pedestrians,
residents, and businesses.

The AASHTO guide does not list disadvantages, however there are several perceived or anecdotal concerns as listed below:

- All through traffic in a single lane will increase vehicle delays.
- All traffic shifted to a single lane results in more vehicles adjacent to on-road cyclists.
- All through traffic in a single lane results in difficulty for vehicles turning to and from side streets and driveways.
- All through traffic in a single lane can result in increased transit times.
- All through traffic in a single lane means that any vehicles double parking will block the single travel lane.

The previous discussion shows that there are a number of trade-offs associated with the implementation of a road diet. For example, placing all vehicle traffic in a single lane may provide a traffic calming effect but could increase delays for traffic turning onto Western or Madison Avenues due to fewer gaps in the single stream of traffic. All potential benefits and concerns should be weighed in assessing the feasibility and practicality of a road diet.

In addition to the above concerns, several criteria have been identified as success factors for feasibility of the road diet. These include:

- Maintaining the existing curb lines. This means that feasible alternatives must fit within the existing roadway width.
- Allowing sufficient opportunities for turning vehicles to enter and exit mainline traffic without unduly interrupting mainline flow. Generally speaking, this criterion dictates the necessity for queuing space for turning vehicles that will not interrupt mainline flow.
- Maintaining parking on both sides of Madison Avenue. This criterion limits the space available to accommodate moving traffic (passenger vehicles, bicycles, and buses).
- Striving to provide standard lane widths.

## Chapter 2. Existing Conditions

An Existing Conditions assessment was completed which is contained in Appendix A. The assessment includes existing pedestrian, bicycle, and transit conditions along the corridor. The evaluation found that while the corridor has many good features for pedestrians and transit users, the lack of bicycle accommodations is apparent. The existing conditions assessment is summarized below.

### A. Corridor Conditions

The study area can generally be broken into two segments: the Western Avenue segment which is 0.2 miles long and the Madison Avenue segment which is 1.6 miles long. Western Avenue generally provides a 42-foot wide roadway with two 10.5 foot travel lanes in each direction. Madison Avenue provides a 57-foot wide roadway with 7 to 8 foot parking lanes on each side of the road and two travel lanes in each direction ranging in width from 10 to 11.5 feet wide. Land uses along the corridor are a mix of residential, educational, and commercial and the posted speed limit is 30-mph.



Madison Avenue near Robin Street

### 1. Pedestrians

Pedestrians are accommodated through sidewalks located on both sides of the road that are generally 5 feet or wider. Marked crosswalks are generally present at the study intersections, although some of the crosswalk markings are faded. A few of the intersections have full Americans with Disabilities Act (ADA) compliant pedestrian accommodations such as curb ramps, detectible warning fields, and pedestrian signals with countdown timers.

### 2. Bicycles

There are no bicycle accommodations on Western or Madison Avenues. Narrow lane widths and the presence of occupied on-street parking result in bicyclists sharing the general travel lane with vehicles. Review of the existing conditions along the study corridor identified cyclists of all ages and abilities using Western and Madison Avenues. Several different types of bicycle racks are available along the corridor, providing space for two bicycles each.





### 3. Transit

Capital District Transportation Authority (CDTA) neighborhood bus routes 63 and 114 serve the study corridor with transfers available to other neighborhood and commuter routes at Allen Street, Main Street, Quail Street, New Scotland Avenue, and Lark Street. Bus stops are located all along Western and Madison Avenues including several new bus stops with bus shelters, signs, bicycle racks, and good access between the bus stop and the bus.



### **B.** Accident History

An accident analysis was performed for the study corridor using accident data provided by the City of Albany. The analysis included the review of 481 crashes over a three year period from November 1, 2008 through October 31, 2011. A detailed accident summary sheet and accident history are included in Appendix B. The data shows the following:

- Most of the accidents occurred during clear, dry conditions suggesting that weather conditions and pavement conditions are not the primary contributing factors of the crash history.
- 55% of crashes in the corridor are of a type potentially correctible by a road diet (24% rear end and 31% sideswipe).
- 32 crashes (7%) involved pedestrians or cyclists.
- The primary contributing factors to corridor crashes were driver inattention (27%) and failure to yield right-of-way (18%).
- There were two fatal accidents, accounting for 0.4% of the total crashes during the timeframe of the crash evaluation.
- Property damage crashes accounted for 66.2% of total crashes, injury crashes accounted for 16.4% of total crashes, 15% of the crashes were non-reportables, and the remaining 2.3% were of unknown type.

Road Diets have been identified by FHWA as Proven Safety Countermeasures indicating that the rear end, sideswipe, pedestrian, and cyclist crash trends may be correctible.

### C. Traffic Volumes

Information published by the New York State Department of Transportation (NYSDOT) shows that daily traffic volumes along Western Avenue are approximately 18,800 vehicles per day (vpd) and 15,000 vpd on Madison Avenue. The daily traffic variation is shown in the following chart which shows the number of vehicles on each roadway during each hour of a typical weekday.



NYSDOT Hourly Traffic Volumes

Intersection turning movement traffic counts were conducted for the project during the spring of 2012 when schools were in session. Data was collected to capture the morning peak from 7:30 to 8:30 a.m., the evening peak from 4:30 to 5:30 p.m. and an off-peak period from 1:30 to 2:30 p.m. Data collection included passenger vehicles, school buses, trucks and other heavy vehicles, pedestrian crossings, and bicycle activity. The existing peak hour turning movement information is contained in Appendix C. The following observations are evident:

- The PM peak hour is the busiest time period.
- Bicycle activity was observed throughout the corridor during the AM, PM, and offpeak periods. During the AM peak hour up to 15 cyclists were observed at each intersection, up to 23 cyclists were observed at each intersection during the PM peak hour, and during the off-peak period up to 11 cyclists were observed at each intersection.
- Pedestrian activity varied throughout the corridor. Though pedestrian crossings were observed at all intersections during all peak conditions, pedestrians appeared most active during the PM peak hour with the largest number of crossings at the Lark Street intersection.

### **D.** Operations

Capacity analyses were completed using Synchro 8 software to identify existing vehicle operations and levels of service through the study corridor. The analysis was also used to provide a base condition to compare the various alternatives. Table 2.1 summarizes the existing levels of service during the AM, PM and off-peak conditions.

Intersection		AM Peak	PM Peak	Off-Peak
		Hour	Hour	
WE-1	Manning Blvd	C (24.3)	C (24.0)	C (21.3)
WE-2	Pine Ave	A (3.0)	A (5.2)	A (3.6)
WE-3	Allen St	D (36.0)	D (44.1)	D (38.4)
MA-1	West Lawrence St	B (12.6)	B (12.6)	B (10.8)
MA-2	Main Ave	B (17.9)	B (16.1)	B (13.1)
MA-3	St. Rose Dwy	A (3.0)	A (5.2)	A (5.2)
MA-4	Partridge St	B (11.8)	B (13.7)	B (11.1)
MA-5	Ontario St	A (9.3)	A (8.8)	A (8.1)
MA-6	Quail St	B (12.0)	B (12.8)	B (10.5)
MA-7	South Lake Ave	B (16.2)	B (15.2)	B (12.2)
MA-8	Robin St	B (11.9)	B (12.2)	B (10.7)
MA-9	New Scotland Ave	B (13.9)	C (30.2)	B (12.7)
MA-10	Willett St	B (12.0)	B (12.3)	B (11.0)
MA-11	Lark St	E (63.1)	D (41.9)	D (38.5)

Table 2.1 – Existing Overall Level of Service

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

The analysis shows that the majority of the study intersections currently operate at very good levels of service (LOS) as shown by the LOS A/B ratings for many of the intersections. LOS C (average delays) prevails at Manning Blvd during all peak periods and at New Scotland Ave during the PM peak period. Only Lark Street and Allen Street operate at LOS D, with Lark Street alone operating at LOS E during the morning peak hour. Overall, acceptable levels of service exist in the corridor during all peak periods.

## Chapter 3. Alternatives and Evaluation

As noted previously, a Road Diet involves the reallocation of pavement to reduce the number of lanes or functional width. Therefore, the proposed alternatives are limited by the space available between the existing curb lines; along Western Avenue there is a 42-foot cross section and along Madison Avenue there is a 57-foot cross section.

There are multiple design options for implementation of a road diet that would accommodate cyclists, motorists, and parked vehicles. However, as noted in Chapter 1 of this report, there are several criteria that should be included in a feasible alternative. The criteria help define the feasible alternatives and include:

- Maintain existing roadway widths (42-feet on Western Avenue, and 57-feet on Madison Avenue)
- Provide a lane for turning traffic
- Maintain parking on both sides of the street (Madison Avenue only)
- Achieve standard lane widths

Based upon these criteria, two alternatives, and any variation of these alternatives, are considered "not feasible". They include implementation of a cycle track and implementation of a two-lane roadway. Based upon various design criteria, provision of a cycle track will not fit within the available 57-foot roadway width. The two-lane roadway will not provide a lane for turning traffic. Therefore, the next section evaluates variations of a three-lane roadway to determine feasible road diet alternatives.

### A. Operations

Capacity analyses were completed using Synchro 8 software to identify the impacts associated with providing several roadway configuration alternatives:

- Alternative 1: Existing roadway configuration and planned signal improvements
- Alternative 2: 3-lane roadway through entire corridor <u>without</u> signal coordination
- Alternative 3: 3-lane roadway through entire corridor with signal coordination
- Alternative 4: 3-lane roadway along Madison Avenue without signal coordination
- Alternative 5: 3-lane roadway along Madison Avenue with signal coordination

Traffic signal improvements are expected at ten intersections throughout the corridor as part of other projects. Therefore, Alternatives 2 through 5 all include the planned signal improvements. Alternatives 3 and 5 take the signal improvements to the next step by implementing signal upgrades at the four remaining intersections and coordinating the entire corridor to provide good progression for vehicles on Western and Washington Avenues.

Table 3.1 compares the proposed alternatives to the existing conditions for several measures of effectiveness (MOEs) including, travel time, speed, and vehicle emissions.

Measure of Full 4		e Corridor	Full 3-lane Corridor		Partial 3-lane Corridor	
Effectiveness	Existing	With Signal Imps Alt 1	Without Coord. Alt 2	With Coord. Alt 3	Without Coord. Alt 4	With Coord. Alt 5
Stops (#)	15,299	14,991	16,609	14,090	16,635	13,568
Total Delay (hrs)	138	132	369	337	171	146
Travel Time (min)						
Eastbound	6.4	6.1	7.9	7.3	7.0	6.5
Westbound	7.7	7.1	23.0	21.4	9.1	7.2
Fuel Consumed (gal)	309	303	486	448	340	305
CO Emissions (kg)	22	21	34	31	24	21
Average Speed (mph)	13	13	6	7	11	12
Arterial LOS	E	E	F	F	E	E
Performance Index	180	174	416	376	217	184
Bike Benefit	No	No	Yes	Yes	Yes	Yes
Accident Benefit	No	No	Yes*	Yes*	Yes*	Yes*

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\* 10 to 65% crash reduction based upon *Road Diet Handbook: Setting Trends for Livable Streets* published by the Institute of Transportation Engineers (ITE) and a study conducted by the Highway Safety Information System (HSIS) in the *Evaluation of Lane Reduction "Road Diet" Measures on Crashes* report.

The Performance Index (PI) is a Synchro function that represents a combination of delay, stops and queuing and is a method for quantifying overall traffic operations. A lower PI number corresponds to better operations. The analysis shows the following:

- Under existing conditions the corridor has a PI of 180.
- Upgrading several of the traffic signals in the corridor as planned through other projects results in a PI of 174. This option (Alternative 1) does not improve conditions for cyclists or reduce accident potential.
- All four road diet alternatives result in improved bicycle accommodations and reduce the potential for accidents.
- Corridor operations would be unacceptable if the Road Diet was implemented along the Western Avenue section (Alternatives 2 and 3). Vehicle delays and the PI would more than double. This is primarily due to the traffic volumes on Western Avenue which are approaching 20,000 vpd. A Road Diet is not feasible along this section of Western Avenue.
- Implementation of a Road Diet just along the Madison Avenue portion of the corridor with no signal coordination (Alternative 4) results in a PI of 217, and may be feasible, however increased vehicle delays will be apparent. There would be a 30 percent increase in vehicle delay (171/132).
- Including signal coordination in the project (Alternative 5) minimizes adverse impacts and brings the PI and vehicle delays closer to existing conditions.
- Alternative 5 is considered feasible Road Diet limited to Madison Avenue with traffic signals coordinated. Maintain four lanes on Western Avenue.

Table 3.2 compares the existing levels of service in the corridor to levels of service that would be experienced in the corridor with construction of Alternative 5. The analysis shows that with implementation of a Road Diet and signal coordination along Madison Avenue, the overall levels of service will be comparable to existing conditions. Even though levels-of-service will be satisfactory, some increased delay may be apparent on select side streets and driveways.

Intersection		Existing	Alt 5
WE-1	Manning Blvd	C (24.0)	C (20.6)
WE-2	Pine Ave	A (5.2)	A (1.9)
WE-3	Allen St	D (44.1)	D (46.1)
MA-1	West Lawrence St	B (12.6)	A (9.6)
MA-2	Main Ave	B (16.1)	C (21.0)
MA-3	St. Rose Dwy	A (5.2)	A (5.0)
MA-4	Partridge St	B (13.7)	B (14.2)
MA-5	Ontario St	A (8.8)	B (10.4)
MA-6	Quail St	B (12.8)	B (15.9)
MA-7	South Lake Ave	B (15.2)	B (17.8)
MA-8	Robin St	B (12.2)	B (12.5)
MA-9	New Scotland Ave	C (30.2)	C (22.6)
MA-10	Willett St	B (12.3)	B (14.9)
MA-11	Lark St	D (41.9)	D (41.9)

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

### **B.** Roadway Layout

Various resources were reviewed to determine appropriate lane widths and pavement marking configurations to implement a Road Diet, including the "AASHTO Green book"<sup>2</sup>, the AASHTO Guide for the Development of Bicycle Facilities, the Manual on Uniform Traffic Control Devices (MUTCD), and the NYS Vehicle and Traffic Law, among others. Review of these sources has resulted in three general roadway layout options:

- Option A: Shared Travel Lane for bicycles and vehicles.
- Option B: Shared Parking Lane in which there is a wide parking lane for bicycles and parked vehicles.
- Option C: Exclusive Bike Lane in which vehicles, bicycles, and parked vehicles each have delineated space.

The following three images illustrate how the three roadway layout options could look on Madison Avenue. Although all three of these options appear feasible, Options B and C would require some concession on desirable lane widths (center turn lane should be 11 feet wide and the parking lanes should be 8 feet wide). Exclusive bicycle lanes are preferred by AASHTO when sufficient width exists.

<sup>&</sup>lt;sup>2</sup> A Policy on Geometric Design, published by the American Association of State Highway and Transportation Officials



Option A: Shared Travel Lane



Option B: Shared Parking Lane



Option C: Exclusive Bike Lane

Although a Road Diet is not feasible on Western Avenue, sharrow pavement markings could be installed on the section of Western Avenue between Manning Boulevard and Allen Street with any of the Options. The western end of Madison Avenue would need to transition back to match existing conditions before Allen Street. Similarly, the eastern end of Madison Avenue would need to transition back to match existing conditions before Allen Street. The type and location of any new signs will need to be confirmed during the design process.

Although within the City of Albany, delineated bicycle lanes are a relatively new design feature, Clinton Avenue from Ten Broeck Street to Lexington Avenue has delineated bicycle lanes. Between intersections, the 52-foot wide roadway of Clinton Avenue allows 10-foot parking lanes, 4-foot bicycle lanes, and 12-foot travel lanes; there is no center two-way, left-turn lane. At intersections, an 11-foot left-turn lane replaces the delineated bicycle lanes on Clinton Avenue along with 21-foot wide shared parking and travel lanes. These two roadway designs are illustrated in the following image.



Clinton Avenue Bike Lanes and Intersection Turn Lane

### C. Stakeholder and Public Participation

Public participation for this feasibility study included two stakeholder meetings and two public meetings (meeting summaries and public comments received are included in Appendix D). The first stakeholder meeting was held on July 11, 2012 to obtain input on the corridor issues and alternatives before starting the detailed feasibility analysis. Comments and questions involved all modes of transportation, safety, and parking.

The second stakeholder meeting was held on February 20, 2013 to present the initial findings of the feasibility analysis. The five alternatives were presented with their associated pros and cons. The three roadway layout options were also presented. The stakeholders supported implementation of a road diet along Madison Avenue, but no definitive roadway layout preference was identified.

Two public meetings for the project were held on April 16, 2013 at 11:00 a.m. and at 6:30 p.m. to reach the widest audience possible. The same material was presented at both meetings. The meetings included a presentation of the project evolution and findings and a question and answer period. Similar to the stakeholder meetings, general support for the road diet (specifically Alternative 5) was identified, but reaction to the roadway layout was mixed.

In addition to the stakeholder and public meetings, written comments were received throughout the study process.

### D. Implementation and Funding

The feasibility study identified Alternative 5 as the feasible alternative with three potential roadway layout options. Detailed engineering design is needed to determine which of the roadway layout options is preferred. In addition to the detailed design, construction funding is needed to implement a road diet along Madison Avenue. Unfortunately in these fiscally constrained times, there are limited funding options available within the current financial scope and significant competition amongst projects for that funding. Some more likely options are summarized below:

- Municipal funding through allocated funds or through a municipal bond. This is the most straight-forward funding source but also the most costly to the City.
- Work with CDTC on a joint project for pavement preservation and traffic signal improvements. The pavement preservation and striping could be funded through CDTC pavement preservation funds while an alternate source of funding is sought for the signal upgrades. This shared funding approach takes advantage of matching federal funds to accomplish the paving and striping work, likely costing the City only 20% and potentially as little as 5% of that eligible work.
- Apply for a Transportation Enhancement Program Award. Solicitations are currently
  underway for these projects which could be funded using the last of the monies available
  under SAFETEA-LU. It is envisioned that competition for this limited funding will be
  high, but this project will have an advantage with significant public outreach already
  completed. If successful, there is potential for 80% of the entire project to be covered by
  this funding with only a 20% local share required.
- Apply for funding under the Transportation Alternatives Program which is funded under the most recent transportation bill MAP-21. Applications for these funds will begin during the next calendar year. Although this project could be successful under this option, the lead time for project selection will be long as would the construction funding if successful.

### Chapter 4. Conclusions and Recommendations

This report summarizes the results of a road diet feasibility study on Western Avenue from Manning Boulevard to Allen Street and on Madison Avenue from Allen Street to Lark Street. A typical road diet involves the reallocation of four travel lanes (two in each direction) to one travel lane in each direction with a center two-way left-turn lane to improve mobility for all users. The study compares the benefits and impacts associated with several alternatives developed.

Based on the evaluation, overall corridor mobility could improve for all users through the implementation of a road diet by providing space for cyclists, reducing pedestrian/vehicle conflicts, and reducing the potential for rear-end and sideswipe crashes. Analyses show that there may be a slight increase in vehicular delay but overall conditions should remain acceptable.

There appear to be three pavement marking Options for the preferred Road Diet alternative (single travel lanes with a shared center turn lane and coordinated traffic signals) which can be coordinated through the design process.

- Alternative 5, Option A: Shared Travel Lane on Madison Avenue with Signal Coordination
- Alternative 5, Option B: Shared Parking Lane on Madison Avenue with Signal Coordination
- Alternative 5, Option C: Exclusive Bike Lane on Madison Avenue with Signal Coordination

The image below identifies the improvements needed within the corridor to implement Alternative 5A, 5B, or 5C.

Winthroy Ining Blyd N Pine Ave	Z State St Chestnut St Lancaster St Z Jay St of E	Callenged JSt Western Ave Callenged JSt Western Ave Hudson Ave	State St Con part Con pa	St aster
(o) War	Western Ave	Hamilton St 4.5 (14.5) (14.5) (1.5	Dove Standard	
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rion Ave	Park Ave Warren St Ryckman Ave Based	Park Ave Park 2 Maint and in Warren St Warren St	ain four (4) lanes on Western Avenue Istall sharrow pavement markings	tle Ar
Cortland St	Bancket St Hansen Ave Woodlawn Ave	Mercer St Merce St Providence	I new communication equipment	non
Bower St avy aug	W Lawrence od Si W Erie St	Voodawm Ave so Provide	Union ox Clara Barton Dr	IT

# Appendix A

# **Existing Conditions Summary**

Madison Avenue Road Diet Feasibility Study City of Albany, Albany County, New York



# Memorandum

To:	City of Albany
CC:	Creighton Manning Engineering, LLP; Jeff Olson, Alta Planning + Design
From:	Lindsay Zefting, PE, Alta Planning + Design
Date:	July 6 <sup>th</sup> , 2012
Re:	Madison Avenue – Existing pedestrian and bicycle conditions

## 1 Madison Avenue – Existing Pedestrian and Bicycle Conditions

The study area along Madison Avenue is from Lark Street to South Manning Boulevard. A bicycle and pedestrian audit was preformed on June 14<sup>th</sup> between 9am and 12pm. The weather was warm and sunny. Sidewalks are existing on both sides of the street, providing pedestrian access to Washington Park, Albany Medical Center, the College of St Rose, and many local businesses. There no bicycle accommodations along Madison Avenue. Lane widths are already narrow with on – street parking in either direction. Existing pavement space would need to be reallocated to provide on-street bicycle accommodations. There are both pedestrians and cyclists of all ages and abilities currently using the facilities along Madison Avenue. Based on existing conditions, the following are the top ten opportunities and constraints for the corridor.



On-road cyclists on Western Ave



Good pedestrian streetscape at the Madison Theatre

## 1.1 Pavement Markings

Marked crosswalks are present at a majority of crossings throughout the corridor, but most are worn and hardly visible. The intersection of Lark Street and Madison Avenue has solid red stamped crosswalks. All other crosswalks are a standard style crosswalk. There are also no bicycle pavement markings.



Worn crosswalks at Madison Ave and Knox St

## **1.2 Street Trees**

Street trees make a significant difference in defining the space along Madison Avenue. Several blocks have nicely spaced street trees with large canopies. Other blocks have some mature trees with other much smaller trees. Still others have no street tress at all.



Variation in street trees along Madison Ave and Washington Park

## 1.3 Bus Stops

There are bus stops all along the Madison Avenue corridor. There are seveal new bus stops with one shelter, signage, bicycle racks, and good access. There are many others, such as the one on Western Avenue near South Manning Boulevard shown below, that just have signage without pedestrian access or a waiting area.



Typical bus stop along Madison Ave

## 1.4 Signage/Wayfinding

Signage and wayfinding is minimal relative to the abundance of destinations along the corridor. On the east end of the study area, many street signs are missing. The college of St Rose has done well with their destination and wayfinding signage in this portion of Madison Avenue.



Destination signage at Washington Park

## **1.5 Bicycle Parking**

There are several bicyle racks along the corridor, acommodating two bicycles each. Most are a variation on a U-rack design but they are all different designs. The design and installation of the bicycle racks should be consistant to create a unified space along Madison Avenue. Even with the bicycle racks present, there are gaps in bicycle parking to key destinations and the single U-rack design offers few bicycle parking spaces in this area.



Bike rack outside El Loco Mexican Cafe

### 1.6 ADA Access

Only a few of the intersections along Madison Avenue have full ADA accessible ramps and pedestrian signals. While most of the intersections and crossings have curb ramps that are ADA compliant, more than half are missing detectable warning strips. The image to the right shows the correct placement of curb ramps and detectable warning strips at the intersections of Lark Street and Madison Avenue.



Colored crosswalks at Lark St and Madison Ave

## **1.7 Pedestrian Lighting**

Pedestrian scale lighting is sporadic throughout the corridor while highway cobra head lighting is more common. There are also gaps in the existing lighting. Where pedestrian scale lighting exists, it is typically on the north side of Madison Avenue. Porch lights on the buildings along the south side currently supplement the lack of street lights.



Pedestrian scale lighting between Madison Ave and Washington Park

## 1.8 Sidewalk Quality

Sidewalks exist on both sides of the street for the length of the study area. Sidewalks are generally 5 feet or wider without any steep slopes and are ADA compliant. There are some areas where the sidewalk has either been ripped up and not replaced or is cracked and uneven. These sections will need repairs or replacing but generally the sidewalks are in good condition. Several sections, including in front of St Rose and the theatre, are wider than 5 feet providing even more pedestrian space.



Variations in sidewalk widths along Madison Ave

## **1.9 Driveway Access**

In the middle of the corridor, driveway access is minimal and also narrow, reducing pedestrian and vehicle conflicts. On both the east and west ends of the corridor, commercial driveways are frequent and are much wider than needed. Access management techniques should be implemented to eliminate duplicate driveways and to narrow access points to provide safer pedestrian crossings.



Mobil Station at Lark St and Madison Ave with wide driveways City of Albany| **4** 

## **1.10 Complex Intersections**

There are some wider intersections in the corridor that create a long crossing distance for pedestrians. There are three complex intersections at either end of the corridor; Lark Street and Madison Avenue; Willett Street and Madison Avenue; Western Avenue and Madison Avenue, in Pine Hills. Crosswalks and pedestrian signals are present. Additional improvements can be made to reduce pedestrian exposure time and clarify movements for bicyclists and vehicles.



Complex intersection at Madison Ave and Western Ave

## **Complete Street Checklist**

Street Name: Madison Avenue	
Project Length: 1.8 Miles Roadway cl	assification: 14- Urban Principal Arterial
Number of Intersections: 13 Ave. distance	ce between intersections: 730 feet
Motor Vehicles	
AADT: 13400 – 14900 vpd Truck Traffi	c: 6% Speed Limit: 30 mph
Lanes per direction: 2 Lane width: 10	Turning Lanes: No Median: None
On street parking: 🛛 Yes 🗌 No Both	sides: 🖂 Yes 🗌 No
Restrictions: One day restrictions on either side	
Pedestrians	
Volume: appox. 900 per peak hour	
Sidewalks: Xes Down Both sides	s: 🛛 Yes 🗌 No Ave. width: 5' or greater
Condition: 🗌 good 🖾 fair 🗌 poor	
Utility Strip: 🛛 Yes 🗌 No Type: Gra	ss/pavement Width: ~5'
Street trees: 🛛 Yes 🗌 No Spacing: V	Varies
Lighting: 🛛 Yes 🗌 No Pedestria	n scale: 🛛 Yes 🗌 No 🛛 Spacing: Varies
Crosswalks: Xes No Type: S	standard 🗌 solid 🗌 continental 🗌 zebra
Condition: 🗌 good 🗌 fair 🖾 poor	
Curb ramps: 🛛 Yes 🗌 No Detectable	e warning strips: 🖂 Yes 🗌 No
Pedestrian Master Plan recommendations: N/A	
Bicyclists	
Volume: approx. 50 per peak hour	
Bike Route: 🛛 Yes 🗌 No Route #: NY	′S 5
Bicycle accommodation: Signage Sharrow	/s 🗌 shoulders 🗌 bike lane 🗌 other:
Intersection bicycle treatments: none	
Bicycle parking: Xes No	
Spacing: varies Type: varies, mostly U-rac	k Total Number of Spaces: ~25
Bicycle Master Plan recommendations: major bik	eway

Transit
Transit service: Xes No
Type: 🖂 bus 🗌 BRT 🗌 light rail 🗌 subway 🗌 other
Frequency: every 35 minutes
Bicycle accommodations: Xes No
Transit stops: 6 stops
Amenities: Signs benches shelters bike racks ADA accessibility other: Mostly signs, some shelters
Generators
School zone: Yes No
Other large generators: Empire State Plaza / Albany Medical Center / College of St. Rose / Washington Park

# **Appendix B**

# **Accident Evaluation**

Madison Avenue Road Diet Feasibility Study City of Albany, Albany County, New York

					Accident S	Summary Sh	eet						
	PIL STUDY AREA												
	Location: Period Covered	Madison Avenue Between	Allen Street and Delaware Ave	City:	Albany								
	Period Covered:	6/1/2012		County:	Albany								
	Date.	0/1/2012											
	Time of Day	No. of Accidents Percent	age (%)	Accident Severity	No. of Accidents Perce	entage (%)	Contributing Factors	V1	V2	V3	V4	Total	%
	12AM-6AM	47	9.8%	Fatal Injuny	2	0.4%	Alconol Involvement Backing Unsafely	2	26	2	3	0	10 1.60%
	6AM-10AM	90	9.8%	Non-Fatal Injury	41	8.5%	Driver Inattention/Distraction	4	135	21	9	4	69 27 08%
	10AM-4PM	154	32.0%	Property Damage Only	196	40.7%	Driver Inexperience	5	5	5	1	0	11 1.76%
	4PM-7PM	107	22.2%	Property Damage & Injury	38	7.9%	Failure to Yield Right-of-way	7	82	14	13	3 '	12 17.95%
	7PM-12AM	81	16.8%	Non-Reportable	72	15.0%	Following Too Closely	9	39	5	1	0	45 7.21%
	Unknown	2	0.4%	PDO or NR	121	25.2%	Lost Consciousness	11	1	0	0	0	1 0.16%
	Total	481	100.0%	Unknown	11	2.3%	Passing or Lane Usage Improper	13	29	6	2	1	38 6.09%
				Total	481	100.0%	Pedestrian/Bicyclist/Other Pedestrian Error/Confu	sion 14	1	1	11	0	13 2.08%
	Weather	No. of Accidents Percent	age (%)				Physical Disability	15	1	1	0	0	2 0.32%
	0		50.4%			( (0()	Traffic Control Disregarded	17	31	4	4	0	39 6.25%
-	Clear	281	58.4%	Accident Type	No. of Accidents Perce	entage (%)		18	20	7	3	0	30 4.81%
	Cloudy	109	22.1%	Deer End	110	22.5%	Unsafe Speed	19	5	2	0		7 1.12%
	Rain	08	14.1%	Real End	113	23.5%	Call Dhana (Hand Hald)	20	13	9	1		24 3.85%
-	Show	15	0.4%	Bight Angle	72	15.0%	Outside Car Distraction	22	1	0	0	0	1 0.16%
	Fog/Smog/Smoke	1	0.4%		53	11.0%	Reaction to other unipyolved vehicle	26	9	0	2	1	12 1 92%
	Linknown	5	1.0%	Right Turn	10	2.1%	Eailure to Keep right	20	2	1	1	1	5 0.80%
	Total	481	100.0%	Head-On	4	0.8%	Aggressive Driving/Road Rage	28	1	1	0	0	2 0.32%
				Fixed Object	6	1.2%	Accelerator Defective	41	0	0	0	0	0 0.00%
	Pavement Condition	No. of Accidents Percent	age (%)	Other	29	6.0%	Brakes Defective	42	1	1	0	0	2 0.32%
				PED	22	4.6%	Oversized Vehicle	45	1	0	0	0	1 0.16%
	Dry	339	70.5%	BIKE	10	2.1%	Tire Failure/Inadequate	47	1	0	0	0	1 0.16%
	Wet	110	22.9%	Overturned	0	0.0%	Other Vehicular	60	2	1	0	0	3 0.48%
	Muddy	0	0.0%	Ran of Road	1	0.2%	Animals Action	61	0	0	1	0	1 0.16%
	Snow/Ice	25	5.2%	Parked	1	0.2%	Glare	62	8	6	1	0	15 2.40%
	Slush	2	0.4%	Unknown	10	2.1%	Obstruction/Debris	64	2	0	1	1	4 0.64%
	Flooded	1	0.2%	Total	481	100.0%	Pavement Slippery	66	9	5	2	0	16 2.56%
	Other	0	0.0%				View Obstructed/Limited	69	13	6	7	2	28 4.49%
		4	0.8%										24 100.00%
	lotai	481	100.0%										
	Time of Year	No. of Accidents Percent	age (%)	Location	Location # No. o	of Accidents Perc	centage (%)	Western Avenue Accid	onts - 4/1/07 - 3/3	1/10			
										Location			
	Winter (Dec Feb.)	115	23.9%	Pine to Allen Segment	2A	2	0.4%	II	Tuno Monning I	Disc. Of		-	
	Spring (Mar May)	116	24.1%	147 J / 411 J J J J			011/0	Accident	iype wanning i	Siva Pine Str	eet		
	Summer (June - Aug.)	1	24.170	Western/Allen Intersection	3	13	2.7%	Accident	rype manning i	Siva Pine Str	eet		
	Fall (Sept Nov.)	101	21.0%	Allen to W. Lawrence Segment	3 3A	13 19	2.7% 4.0%	Accident  Non-Rep		13	3		
		101 149	21.0% 31.0%	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection	3 3A 4	13 19 16	2.7% 4.0% 3.3%	Accident  Accident Non-Rep Rear End		13 21	3 8		
	Total	101 149 <b>481</b>	21.0% 31.0% 100.0%	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment	3 3A 4 4A	13 19 16 24	2.7% 4.0% 3.3% 5.0%	Accident Non-Rep Rear End Bike		13 21 0	3 8 0		
	Total	101 149 481	21.0% 31.0% 100.0%	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment N. Main Intersection	3 3A 4 4A 5	13 19 16 24 24	2.7% 4.0% 3.3% 5.0% 5.0%	Accident Non-Rep Rear End Bike Right Angl	e Manning i	13 21 0 3	3 3 8 0 6		
	Total Light Condition	101 149 481 No. of Accidents Percenta	21.0% 31.0% 100.0% age (%)	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment N. Main Intersection N. Main to St. Rose Segment	3 3A 4 4A 5 5A	13 19 16 24 24 14	2.7% 4.0% 3.3% 5.0% 5.0% 2.9%	Accident Non-Rep Rear End Bike Right Angl Overtaking	e	13 13 21 0 3 6	3 3 8 0 6 4		
	Total	101 149 481 No. of Accidents Percenta	21.0% 31.0% 100.0% age (%)	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment N. Main Intersection N. Main to St. Rose Segment St. Rose Intersection	3 3A 4 4A 5 5A 6	13 19 16 24 24 14 0	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian	e	Siva         Pine Str           13	eet 3 0 6 4 0 0		
	Total Light Condition Daylight	101 149 481 No. of Accidents Percent	21.0% 21.0% 31.0% 100.0% 64.4% 2.2%	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment N. Main Intersection N. Main to St. Rose Segment St. Rose Intersection St. Rose to Partridge Segment	3 3A 4 4A 5 5A 6 6A	13 19 16 24 24 14 0 18	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left Turn	e e sct	13         21           0         3           6         2           1         -	eet 3 3 0 6 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	Total Light Condition Daylight Dawn	101 149 481 No. of Accidents Percent 310 11	21.0% 21.0% 31.0% 100.0% age (%) 64.4% 2.3% 2.2%	Western/Allen Intersection Allen to W. Lawrence Segment West Lawrence Intersection W. Lawrence to N. Main Segment N. Main Intersection N. Main to St. Rose Segment St. Rose Intersection St. Rose to Partridge Segment Partridge Intersection	3 3A 4 4A 5 5 5A 6 6 6 6 7 7	13 19 16 24 14 0 18 12 27	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On	e	Sive         Pine Str           13	eet 3 3 6 4 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	Total Light Condition Daylight Dawn Dusk Dork Read Lighted	101 149 481 No. of Accidents Percent 310 11 16 122	21.0% 21.0% 31.0% 100.0% age (%) 64.4% 2.3% 3.3% 27.7%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge to Ontario Segment           Optarie	3 3A 4 4A 5 5A 6 6 6A 7 7 7A 8	13 19 16 24 24 14 0 18 12 27 18	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 2.5%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sidocwino	e e e e e e e e e e e e e e e e e e e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0	eet 3 3 6 4 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted	101 149 481 No. of Accidents Percent 310 11 16 133 6	21.0% 21.0% 31.0% 100.0% age (%) 64.4% 2.3% 3.3% 27.7% 1.2%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection	3 3A 4 4A 5 5A 6 6 6 6 7 7 7A 8 8 8 4	13 19 16 24 24 14 0 18 12 27 18 12	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Bidht Turn	e contraction of the second se	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0	3           8           0           6           4           0           2           0           0           0		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown	101 149 <b>481</b> <b>No. of Accidents Percent</b> 310 11 16 133 6 5	21.0%         31.0%         100.0%         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge to Ontario Segment         Ontario Intersection         Ontario to Quail Segment         Quail Intersection	3 3A 4 4A 5 5A 6 6 6A 7 7 7A 8 8 8A 9	13 19 16 24 24 14 0 18 12 27 18 12 46	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 5.6% 3.7% 2.5%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision	e e e e e e e e e e e e e e e e e e e	Sive         Pline Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0	3           8           0           6           4           0           2           0           0           0           1		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481	21.0%         31.0%         100.0%         age (%)         64.4%         2.3%         3.3%         27.7%         1.2%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail to South Lake Segment	3 3A 4 4A 5 5A 6 6 6A 7 7 7A 8 8A 9 9	13           19           16           24           24           14           0           18           12           27           18           12           46           8	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 5.6% 3.7% 1.7%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown	e contraction of the sector of	Sive         Pline Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         2	3           3           8           0           6           4           0           2           0           0           0           1           0		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481	21.0%         31.0%         100.0%         age (%)         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge Intersection           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail to South Lake Segment	3 3A 4 4A 5 5A 6 6 6A 7 7 7A 8 8 8A 9 9A	13           19           16           24           14           0           18           12           27           18           12           31	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 5.6% 3.7% 2.5% 6.4%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e pact	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           2         54	Geet         Geet           3         3           8         0           6         4           0         0           2         0           0         0           1         0           0         24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101           149           481           No. of Accidents           310           11           16           133           6           5           481	21.0%         31.0%         100.0%         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Quail Intersection           Quail to South Lake Segment           South Lake to Robin Segment	3 3A 4 4 4A 5 5A 6 6 6A 7 7 7A 8 8 8A 9 9A 10 10A	13         19         16         24         14         0         18         12         27         18         12         31         6	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e e c c c c c c c c c c c c c c c c c c	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         2           54         54	3           3           8           0           6           4           0           2           0           0           0           1           0           24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101           149           481           No. of Accidents           310           11           16           133           6           5           481	21.0%         31.0%         100.0%         age (%)         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail Intersection           South Lake Intersection           South Lake to Robin Segment	3 3A 4 4 4A 5 5A 6 6 6 6 6 6 7 7 7 7 8 8 8 8 8 8 9 9 9 9 10 10 10 10 11	13         19         16         24         14         0         18         12         27         18         12         31         6         8	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7%	Accident Acc	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         54	Geet         Geet           3         3           8         0           6         4           0         2           0         2           0         0           0         0           0         0           0         2           0         0           0         2           0         2           0         2           0         2           0         2		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.1%         21.0%         31.0%         100.0%         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge Intersection           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail Intersection           South Lake Intersection           South Lake Intersection           Robin Intersection           Robin New Scotland Segment	3 3A 4 4A 5 5A 6 6 6A 7 7 7A 8 8 8A 9 9 9A 10 10A 11 11A	13         19         16         24         14         0         18         12         27         18         12         31         6         8         11	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7% 2.3%	Accident Acc	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         54	3         3           8         0           6         4           0         2           0         0           2         0           0         0           1         0           24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0%         31.0%         100.0%         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose Intersection           St. Rose Intersection           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail Intersection           South Lake Intersection           South Lake Intersection           Robin Intersection           Robin Intersection           Robin to New Scotland Segment           Robin to New Scotland Segment	3 3A 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9A 10 10A 11 11A 12	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         11         43	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7% 2.3%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e composition of the sector of	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         54           0         0	3           3           8           0           6           4           0           2           0           0           0           1           0           24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.1%         21.0%         31.0%         100.0%         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose Intersection           St. Rose Intersection           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail to South Lake Segment           South Lake Intersection           South Lake Intersection           Robin Intersection           Robin New Scotland Segment           New Scotland Intersection	3 3A 4 4A 5 5A 6 6A 7 7A 8 8A 9 9A 10 10A 11 11A 12 12A	13           19           16           24           14           0           18           12           27           18           12           46           8           31           6           8           11           43           25	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 5.6% 3.7% 2.5% 5.6% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 5.2%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e e e e e e e e e e e e e e e e e e e	Sive         Pline Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           2         54	3           3           8           0           6           4           0           2           0           0           0           0           0           0           0           0           0           0           24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 481	21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose Intersection           St. Rose Intersection           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario Intersection           Quail Intersection           Quail to South Lake Segment           South Lake Intersection           South Lake Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           Robin Intersection           New Scotland Intersection           New Scotland to Willett Segment           Willett Intersection	3 3A 4 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9A 10 10A 11 11A 12 12A 13	13         19         16         24         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 5.2% 3.5%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e e e e e e e e e e e e e e e e e e e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         54	3       3       8       0       6       4       0       2       0       0       0       1       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 481 	21.0%         31.0%         100.0%         age (%)         64.4%         2.3%         3.3%         27.7%         1.2%         1.0%         100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose Intersection           Partridge Intersection           Partridge Intersection           Partridge to Ontario Segment           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail to South Lake Segment           South Lake Intersection           South Lake to Robin Segment           Robin Intersection           Robin Intersection           New Scotland Intersection           New Scotland to Willett Segment           Willett Intersection           Willet to Lark Segment	3 3A 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9 9A 10 10A 11 11A 12 12A 13 13A	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29	2.7%         4.0%         3.3%         5.0%         5.0%         2.9%         0.0%         3.7%         2.5%         5.6%         3.7%         2.5%         5.6%         3.7%         2.5%         5.6%         3.7%         2.5%         5.6%         3.7%         2.5%         9.6%         1.7%         6.4%         1.2%         1.7%         2.3%         8.9%         5.2%         3.5%         6.0%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e e e e e e e e e e e e e e e e e e e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           2         54	3       3       8       0       6       4       0       2       0       0       2       0       0       1       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 481 	21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection           Allen to W. Lawrence Segment           West Lawrence Intersection           W. Lawrence to N. Main Segment           N. Main Intersection           N. Main to St. Rose Segment           St. Rose Intersection           St. Rose to Partridge Segment           Partridge Intersection           Partridge Intersection           Ontario Intersection           Ontario to Quail Segment           Quail Intersection           Quail Intersection           Quail to South Lake Segment           South Lake Intersection           South Lake to Robin Segment           Robin Intersection           Robin Intersection           New Scotland Intersection           New Scotland to Willett Segment           Willet to Lark Segment           Willet to Lark Segment	3 3A 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9 9A 10 10A 11 11A 12 12A 13 13A 14	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 3.5% 6.0% 8.9%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         0           54         -           -         -           -         -           -         -           -         -           -         -	3       3       8       0       6       4       0       2       0       0       2       0       0       1       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0% 21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge Intersection         Ontario Intersection         Ontario to Quail Segment         Quail Intersection         Quail Intersection         Quail to South Lake Segment         South Lake Intersection         South Lake to Robin Segment         Robin Intersection         New Scotland Intersection         New Scotland to Willett Segment         Willett Intersection         Willet to Lark Segment         Lark Intersection         Willet to Lark Segment	3 3A 4 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9A 10 10A 11 11A 12 12A 13 13A 14 14A	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42         9         7	2.7% 4.0% 3.3% 5.0% 5.0% 2.9% 0.0% 3.7% 2.5% 5.6% 3.7% 2.5% 9.6% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2% 1.7% 6.4% 1.2%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pline Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         0           0         2           54	3       3       8       0       6       4       0       2       0       0       2       0       0       2       0       2       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0% 21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge to Ontario Segment         Ontario Intersection         Quail Intersection         Quail to South Lake Segment         South Lake Intersection         South Lake to Robin Segment         Robin Intersection         Robin Intersection         New Scotland Segment         New Scotland Intersection         Willet to Lark Segment         Willet to Lark Segment         Willet to Lark Segment         Lark Intersection         Willet to Lark Segment         Lark Intersection	3 3A 4 4 4A 5 5A 6 6 6A 7 7A 8 8 8 8 8 8 9 9A 10 10A 10 10A 11 11A 12 12A 13 13A 14 14A Unknown	13         19         16         24         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42         9         7	2.7%         4.0%         3.3%         5.0%         5.0%         2.9%         0.0%         3.7%         2.5%         5.6%         3.7%         2.5%         5.6%         3.7%         2.5%         9.6%         1.7%         6.4%         1.2%         1.7%         2.3%         8.9%         5.2%         3.5%         6.0%         8.7%         1.9%         1.5%	Accident Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         2           54	3       3       8       0       6       4       0       2       0       0       2       0       0       2       0       0       2       0       2       0       2       0       2       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge to Ontario Segment         Ontario Intersection         Quail Intersection         Quail to South Lake Segment         South Lake Intersection         South Lake Intersection         Robin Intersection         Robin Intersection         Robin to New Scotland Segment         New Scotland to Willett Segment         Willet to Lark Segment         Lark Intersection         Willet to Lark Segment         Lark Intersection         East of Lark         Unknown	3 3A 4 4A 5 5A 6 6 6A 7 7A 8 8 8 8 8 9 9A 10 10A 10 10A 11 11A 12 12A 13 13A 14 14A Unknown Total	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42         9         7         481	2.7%         4.0%         3.3%         5.0%         5.0%         2.9%         0.0%         3.7%         2.5%         5.6%         3.7%         2.5%         9.6%         1.7%         6.4%         1.2%         1.7%         2.3%         8.9%         5.2%         3.5%         6.0%         8.7%         1.9%         1.5%         100.0%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         2           54         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -	3       3       8       0       6       4       0       2       0       0       2       0       0       2       0       0       2       0       2       0       2       0       2       0       2       0       2       0       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0% 21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge to Ontario Segment         Ontario Intersection         Quail Intersection         Quail to South Lake Segment         South Lake Intersection         South Lake to Robin Segment         Robin Intersection         Robin Intersection         Robin to New Scotland Segment         New Scotland to Willett Segment         Willet to Lark Segment         Lark Intersection         Willet to Lark Segment         Lark Intersection         East of Lark         Unknown	3 3A 4 4A 5 5A 6 6A 7 7A 8 8 8A 9 9A 10 10A 10 10A 11 11A 12 12A 13 13A 14 14A Unknown Total	13         19         16         24         14         0         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42         9         7         481	2.7%         4.0%         3.3%         5.0%         5.0%         2.9%         0.0%         3.7%         2.5%         5.6%         3.7%         2.5%         9.6%         1.7%         6.4%         1.2%         1.7%         2.3%         8.9%         5.2%         3.5%         6.0%         8.7%         1.9%         1.5%         100.0%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         0           2         54	3       3       8       0       6       4       0       2       0       0       2       0       0       24       24		
	Total Light Condition Daylight Dawn Dusk Dark-Road Lighted Dark-Road Unlighted Unknown Total	101 149 481 No. of Accidents Percent 310 11 16 133 6 5 481 	21.0% 21.0% 31.0% 100.0% 64.4% 2.3% 3.3% 27.7% 1.2% 1.0% 100.0%	Western/Allen Intersection         Allen to W. Lawrence Segment         West Lawrence Intersection         W. Lawrence to N. Main Segment         N. Main Intersection         N. Main to St. Rose Segment         St. Rose Intersection         St. Rose Intersection         St. Rose to Partridge Segment         Partridge Intersection         Partridge to Ontario Segment         Ontario Intersection         Ontario to Quail Segment         Quail Intersection         Quail Intersection         South Lake Intersection         South Lake to Robin Segment         Robin Intersection         Robin to New Scotland Segment         New Scotland Intersection         Willet Intersection         Willet to Lark Segment         Lark Intersection         East of Lark         Unknown	3 3 3A 4 4 4 4 4 5 5A 6 6 6A 7 7A 8 8 8A 9 9 9A 10 10A 10 10A 11 11A 11A 12 12A 13 13A 14 14 14A Unknown Total	13         19         16         24         14         0         18         12         27         18         12         27         18         12         27         18         12         46         8         31         6         8         11         43         25         17         29         42         9         7         481	2.7%         4.0%         3.3%         5.0%         5.0%         2.9%         0.0%         3.7%         2.5%         5.6%         3.7%         2.5%         9.6%         1.7%         6.4%         1.2%         1.7%         2.3%         8.9%         5.2%         3.5%         6.0%         8.7%         1.9%         1.5%	Accident  Non-Rep Rear End Bike Right Angl Overtaking Pedestrian Fixed Obje Left-Turn Head On Sideswipe Right Turn Collision Unknown Total	e	Siva         Pine Str           13         21           0         3           6         2           1         6           0         0           0         0           0         0           0         0           0         0           0         0           0         0           2         54           1         1           1	3       3       8       0       6       4       0       2       0       0       2       0       0       24		

TE 213 (Equ	uivalent)								DETA	AILS OF AC	CIDENT H	<b>ISTORY FO</b>	R LOCA	TION				
Diagram No.:	,					DETAILS OF A	CCIDENT HISTO	ORY FOR LOCAT	TION									-
County:	Albany		PIN <sup>.</sup>			Route No. or St	reet Name:											
Town:	7					Madison Avenue	e/Western Aven											
City:	Albany					At Intersection v	with/ or Between											
Village of:	, liberry					between Mannir	ng Boulevard an	d Delaware Aven										
Time Period																		1
						er												
					S	act	ace											
From <sup>.</sup>		11/01/08			itior	Char	urfa			Apparent Con	tributing Eactors		Type		Dire	ection		
To:		10/31/11	'eh.	Severity	puq	ay C	S L	<u> </u>		Apparent Con			Type		Dire			
No. of Months:		36	of <		ŭ	dwa	dwa	ithe	19	20	21	22		\/1	\/2	\/3	VA	
ID No	Date	Time	10.	INL FAT)	igh	Roa	Son	Vea	10	20	21	22		VI	V2	v3	V4	Location
197	11/2/2008	0:05	2		1	1		2	4				DE	2	2			12
188	11/2/2008	9.05	2	PDO	1	1	1	2	64				RE	1	1			13
24	11/0/2008	14:53	2	100	1	1	1	2	4				RE	1	1			5
514	11/8/2008	10.17	2	PDO	1	1	1	1	4			1	SS	3	.3	1		4
207	11/12/2008	6:52	2	INJ/PDO	1	1	1	1	4				LT	5	8	1		14
37	11/13/2008	14:05	2	NR	1	1	2	3	3				SS	7	3			4A
446	11/15/2008	8:46	2	PDO	1	1	2	3	69				RA	5	7			6A
208	11/16/2008	7:31	2	PDO or NR	1	1	1	1	4	4			RE	5	5			14
348	11/17/2008	18:08	2	PDO	4	1	1	1	5		64		LT	7	5	1		6A
510	11/18/2008	7:46	3	PDO	1	1	1	1	62				RE	3	3	3		3A
433	11/22/2008	1:04	2	PDO or NR	4	1	1	1	3				RE	3	7			7A
5	11/23/2008	2:30	2	PDO	4	1	1	1	18				LT	7	7			5A
19	11/24/2008	6:55	2	U	2	1	1	1	7	4		х	SS	3	3			5A
30	11/28/2008	12:00	2	U	1	1	1	2	7				SS	3	3			4A
38	11/29/2008	12:20	1	PDO/INJ	1	1	1	1	4				FO	1				4A
325	12/4/2008	23:30	2	PDO	4	1	1	1	13				SS	5	5			8
189	12/8/2008	7:07	2	PDO	1	1	1	1	4				RE	7	7			13
472	12/9/2008	20:25	2	INJ/PDO	4	1	1	1	18	7	7	13	LT	7	5			14
107	12/13/2008	14:25	2	INJ/PDO	1	1	1	1	17	62			RA	1	7			10
164	12/17/2008	16:40	2	PDO or NR	4	1	2	2	7				UNKNOWN	6	7			3A
40	12/23/2008	18:40	2	PDO	4	1	2	1	7				LT	4	1			9
17	12/26/2008	9:23	2	U	1	1	1	1	20				SS	7	7			5A
285	12/26/2008	18:35	2	PDO or NR	4	2	1	1	3				OTHER	3	7			12
286	12/29/2008	8:00	2	PDO or NR	1	1	1	2	4				RA	7	5			12
108	12/31/2008	9:44	2	PDU	1	1	4	4	7	69				6	3			
43	1/11/2009	7:15	2		4	2	4	4	00	7			RA	3	1	1		9
502	1/15/2009	19.00	2		2	2	2	1	19	7 			RE	3	7			24
44	1/18/2009	21:05	2		4	1	4	4	17	<u>^</u>			RA	7	5			9
349	1/24/2009	19:20	2	NR	4	1	1	2	9	т			RF	7	7	1		7
425	1/26/2009	1:12	2	PDO	4	1	1	1	5	3			SS	7	7			7A
399	1/26/2009	10:18	2	PDO or NR	1	1	1	1	17	Ŭ Ŭ			RA	7	1		1	10
209	1/27/2009	9:10	2	PDO or NR	1	1	1	1	4				SS	3	7			14
417	1/28/2009	7:53	2	PDO	1	1	4	4	26				SS	3	3			8A
418	1/28/2009	9:09	2	PDO	1	1	4	4	66				RE	3	3			8A
429	1/29/2009	10:22	2	NR	1	1	4	1	69				SS	7	7			7A
566	1/31/2009	11:10	2	PDO	1	2	4	1	4				SS	3	3			12A
6	2/8/2009	10:34	2	PDO	1	1	2	7	18				LT	4	5			5
457	2/11/2009	0:02	1	FAT	4	1	2	2	x		14	х	PED	7				5A
447	2/26/2009	2:30	2	PDO	4	1	2	3	4	x			RE	7	3			7A
405	2/26/2009	7:30	2	PDO	1	1	4	5	7		66		RT	6	7			9A
438	3/3/2009	21:29	2	PDO	4	1	1	1	13				SS	7	7			7A
287	3/4/2009	7:39	2	PDO or NR	1	1	1	1	62	7			LT	3	7			12
23	3/6/2009	12:25	2	PDO/INJ	1	1	1	2	17				RA	1	3			5
388	3/9/2009	10:37	2	PDO or NR	1	1	2	2	4	x			RA	1	3			11A
210	3/10/2009	16:30	2	PDO	1	1	1	2	4	20			SS	3	3			13A

Time Period																		
						ter	0								•			
					su	Irac	ace											
From:		11/01/08			litio	Cha	Surf			Apparent Con	tributing Factors		Туре		Dire	ction		
To:		10/31/11	/eh	Severity	ond	ay (	ay (	л.			<u> </u>				ĺ			
No. of Months:		36	of /	(NR. PDO.	Ŭ	, mp	dwa	athe	19	20	21	22		V1	V2	٧3	V4	
ID No.	Date	Time	- Š	INJ. FAT)	-igh	Zoa	Son	Ve										Location
211	2/14/2000	17:50	2	ND	1	1	1	- 1	1				DE	5	Б			14
519	3/14/2009	18:32	2		1	1	1	1	4				SS	7	3			34
165	3/20/2009	21:00	3	PDO	1	1	1	1	3	20				7	7	7		34
212	3/24/2009	17:30	2	PDO	1	1	1	1	18	69			RA	1	3	'		134
427	3/24/2009	20:09	2	PDO	4	1	1	1	4	x		x	SS	7	7			7A
288	3/29/2009	5:47	4	PDO	4	1	2	3	4	13		~	OTHER	7	7	7	7	12
166	3/30/2009	12:10	1	INJ	1	1	1	2	•		14		BIKE	1	7	-	•	3A
91	3/30/2009	22:41	2	PDO	4	1	1	1	4				UNKNOWN	0	3			3A
45	3/31/2009	17:25	2	NR	1	1	1	1	4		4		SS	2	2			9
46	4/1/2009	16:24	2	PDO	1	1	2	3	13	7			SS	3	3			8A
443	4/2/2009	13:10	1	INJ	1	1	1	1	4				PED	8				7
213	4/2/2009	14:00	2	NR	1	1	1	1	4		7		RA	6	8			14
559	4/13/2009	13:31	2	INJ/PDO	1	1	1	1	13	20			RA	5	3			12A
214	4/19/2009	22:20	2	PDO	4	1	1	2	3				RA	2	5			14
460	4/27/2009	9:14	3	PDO or NR	1	1	2	3	4				SS	7	7			5A
47	4/28/2009	13:26	2	PDO	1	1	1	1	7				LT	2	7			9
463	4/28/2009	16:35	3	PDO	1	1	1	1	4				RE	3	3			5A
415	4/29/2009	17:59	2	PDO	1	1	1	1	7				LT	7	3			9
7	5/1/2009	6:30	2	PDO	1	1	1	2	4				SS	3	3			4A
289	5/2/2009	3:30	3	PDO	4	1	2	3	2	18			OTHER	5	5	5		12
567	5/9/2009	14:30	2	PDO	1	1	1	1	4	5			RE	0	7			12A
556	5/16/2009	17:19	2	PDO or NR	1	2	1	2	9				RE	7	7			12A
92	5/18/2009	13:13	2	PDO	1	1	1	2	4				SS	1	1			3
215	5/18/2009	21:00	2	PDO or NR	4	1	1	1	3				RE	1	5			14
398	5/26/2009	16:36	2	PDO or NR	1	1	1	2	13				SS	3	3			9A
290	5/27/2009	8:12	2	PDO	1	2	2	3	/					8	5			12
190	5/27/2009	8:42	2	PDO	1	1	2	2	4	9			RE	3	3			13
320	5/30/2009	11:20	2		1	1	1	1	13	27				э 7	5			8
515	6/2/2009	22.30	3		4	1	1	2	10	21				7	7			24
480	6/11/2009	5.37	2		2	1	1	2	10	18			DE	7	5	5	5	124
216	6/11/2009	20:57	1	INU	4	1	2	3	66	10	Y		PED	3	5	5	5	144
110	6/13/2009	22:37	1	PDO	4	1	2	3	19	28	~		FO	1				10
48	6/15/2009	13:34	2	PDO	1	1	2	3	17	66			RA	7	1			9
432	6/18/2009	12:10	2	PDO	1	1	2	3	7	4			SS	3	3			7A
448	6/23/2009	15:45	2	PDO	1	1	1	1	26	· · ·			SS	6	7			6A
49	6/26/2009	23:57	4	PDO	4	1	2	6	2	4			SS	3	3	3	3	8A
402	6/27/2009	15:00	2	PDO or NR	1	1	1	2			18		LT	3	1			9A
167	6/27/2009	18:00	2	INJ	1	1	1	2	13				RT	3	4			4
400	6/28/2009	17:12	2	NR	1	1	1	1	4				RE	3	3			10
39	6/29/2009	18:01	2	U	1	1	1	1	18	69	69	x	UNKNOWN					U
93	7/1/2009	9:59	2	PDO	1	1	1	2	4				SS	1	1			3
327	7/1/2009	19:01	2	PDO	1	1	2	3			18	7	RA	7	7			8A
291	7/2/2009	10:40	2	INJ/PDO	1	1	2	3	17				RA	5	3			12
481	7/2/2009	19:30	3	PDO or NR	1	1	2	3	20	7			OTHER	7	7	7		12A
217	7/5/2009	3:10	1	PDO or NR	4	1	1	1	5				FO	7				14A
111	7/6/2009	6:50	2	PDO	1	1	1	1	17				RA	5	3			10
112	7/6/2009	21:50	2	INJ/PDO	5	1	1	2	7		69		RA	7	6			10
94	7/7/2009	8:10	2	PDO	1	1	1	1	9				RE	1	1			3
95	7/9/2009	8:05	2	PDO or NR	1	1	1	2	9				RE	7	7			3
435	7/12/2009	11:03	2	PDO or NR	1	1	1	1	4	х	26		RE	3	3			7A
292	7/13/2009	15:00	2	PDO or NR	1	2	1	1	4				SS	7	7			11A

Time Period																		
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					su	arac	face											
From:		11/01/08	<u></u>		ditio	Che	Sur			Apparent Con	tributing Factors		Туре		Dire	ction		
To:		10/31/11	Veh	Severity	Sone	/ay	/ay ion	e										
No. of Months:		36	. of	(NR, PDO,	ht C	adv	adw ndit	ath	19	20	21	22		V1	V2	V3	V4	
ID No.	Date	Time	N	INJ, FAT)	Lig	Ro	ů Ř	We										Location
351	7/15/2009	12:23	2	PDO	1	1	1	1	7				RA	2	3			6A
328	7/18/2009	16:15	1	PDO	1	1	1	2	13	14			BIKE	3	3			8
395	7/20/2009	17:05	2	INJ/PDO	1	1	1	1	7				SS	6	3			10
383	7/21/2009	14:34	2	NR	1	1	2	3	13				SS	7	7			11A
329	7/27/2009	14:56	1	INJ	1	1	1	1			7		PED	6				8
218	8/1/2009	0:45	2	NR	4	1	1	1	9				RE	7	7			13A
352	8/5/2009	0:05	2	NR	4	1	1	1	4				RE	3	3			7
527	8/5/2009	17:19	2	INJ/PDO	1	1	1	1			7		LT	7	1			13A
384	8/12/2009	3:13	2	PDO or NR	4	1	1	1	4	х			UNKNOWN	х	3			11A
50	8/15/2009	0:02	2	FAT	4	1	1	1	4		7	4	RA	3	5			9
293	8/16/2009	11:11	2	PDO	1	1	1	1	69				SS	7	7			12
168	8/19/2009	22:10	2	NR	4	1	1	1	7				LT	6	7			3A
219	8/22/2009	2:33	2	NR	4	1	1	1	13	X			SS	5	5			14
220	8/24/2009	8:12	2	PDO	1	1	1	1	9				RE	7	7			14
330	8/29/2009	2:30	2	PDO or NR	4	1	2	3	13				SS	7	7			8
27	8/29/2009	20:44	2	NR	4	1	1	1	4	20			KE CC	3	3			4A 12A
548	8/31/2009	13:20	2		1	1	1	2	1	20			55	3	3			13A
113	9/2/2009	11:50	2	PDO	1	1	1	1	4	10	<u> </u>		KE	3	3			10
191	9/3/2009	9:20		PDO	1	1	1	1	69	18	69			7	/			13
51	9/3/2009	15:04	2		4	1	1	1	20				OTHER ee	2	2			0
83	9/10/2009	15:50	2		1	1	2	3	20				RA RA	1	3			114
114	9/14/2009	12:38	2	PDO	1	1	1	1	17				RA	7	5			10
192	9/19/2009	17:14	2	PDO or NR	1	4	1	1	69				RF	, 1	1			13
115	9/21/2009	9:21	2	INJ/PDO	1	1	1	1	17	62			RA	7	1			10
52	9/22/2009	6:16	2	PDO	2	1	1	2	17				RA	5	7			9
221	9/25/2009	23:17	2	PDO	4	1	1	1	7				LT	3	7			14
294	9/27/2009	10:05	2	PDO	1	1	2	3	5				SS	3	3			12
511	9/27/2009	20:28	4	PDO	4	1	2	3	4	5			OTHER	3	3	7	7	3A
376	10/1/2009	7:38	3	PDO	1	1	2	2	2	4			RE	7	7	7		12
570	10/1/2009	7:38	3	PDO	1	1	2	2	2				RE	7	7	7		12
545	10/7/2009	16:52	2	PDO or NR	1	1	1	1	7				SS	7	7			14
142	10/9/2009	17:15	2	PDO	1	1	2	3	4				SS	3	3			4A
31	10/10/2009	15:06	2	PDO	1	1	1	2	26				SS	3	3			4A
331	10/10/2009	23:50	1	INJ	4	1	2	3	14	7	14	7	PED			3		8
377	10/11/2009	17:30	2	PDO	3	2	1	1	9	4			RE	7	7			12
546	10/12/2009	21:07	2	INJ	4	1	1	1	9				RE	7	7			13A
555	10/14/2009	8:15	2	PDO	1	1	1	1	69		69		SS	7	7			13A
222	10/19/2009	14:35	1		1	1	1	1	4				BIKE	4				14
354	10/19/2009	20:35	2		4	1	1	1	17					× ∧	(			10
110	10/20/2009	1:30 8:22	2		1	1	1	<u> </u> 2	17	7				1 2	3			7
303	10/21/2009	0.32 10·20	2		1	1	1	2	02 3	/			RA RA	<u></u> २	1			5
482	10/23/2009	11.00	2	NR	1	1	1	2	4					7	3	7		12A
543	10/24/2009	23.13	2	PDO or NR	4	1	2	3	7				SS	7	7	'		13A
193	10/26/2009	10:15	2	PDO or NR	1	1	- 1	1	60				RE	4	4			12
541	10/27/2009	15:43	2	PDO	1	1	1	1					SS	3	3			13
186	10/30/2009	17:30	2	PDO	1	4	1	2	7				SS	7	7			3
194	10/31/2009	2:20	1	INJ	5	1	1	2	x		2	х	PED	3				13
117	10/31/2009	17:54	2	INJ	4	1	2	3	7				RA	3	5			10
483	11/1/2009	17:38	1	INJ	4	2	1	1	4	х	14		PED	3				12A
195	11/5/2009	17:40	2	PDO	5	1	2	3	7		7		SS	7	7			13

Time Period																		
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					suo	ara	rfac											
From:		11/01/08	h.		diti	ъ,	su ر			Apparent Con	tributing Factors	[	Туре		Dire	ection	l	
To:		10/31/11	f Ve	Severity	CO	way	way	her	10									
No. of Months:	Data	36	0	(NR, PDO,	ight	oad	oad	/eat	19	20	21	22		V1	V2	V3	V4	Location
ID NO.	Date	Time	Z	INJ, FAT)		<u>۳</u>	2 C 22								_			Location
223	11/6/2009	13:00	2	PDO	1	1	1	2	4	X	7	X 07	LT	5	7			14
53	11/6/2009	19:20	2		4	1	1	1	10		1	21	HU	7	3			3
169	11/10/2009	21.14	2	PDO	4	1	1	2	10		3		55 52	3	7			4
542	11/13/2009	12:16	2	NR	1	1	1	1	3		5		RE	7	3			4 13A
170	11/14/2009	18:45	1	INJ	4	1	2	3	4				PED	6				4
224	11/15/2009	0:19	2	PDO	4	2	2	2	4	х	х	х	RE	1	0			14
54	11/16/2009	7:00	2	PDO	2	1	6	7	17				RT	7	1			9
118	11/18/2009	14:55	2	PDO or NR	1	1	1	1	4	х		х	RE	3	3			10
355	11/19/2009	11:40	2	PDO	1	1	1	2	4	20			SS	3	3			6A
171	11/20/2009	19:32	1	NR	4	1	1	1	69				PED	5				4
144	11/21/2009	16:45	2	NR	4	1	1	2	9				RE	7	7			5
172	11/24/2009	8:00	2	NR	1	1	1	2	13		13		SS	1	5			4
145	11/25/2009	17:05	2	PDO	4	1	2	3	7				LT	7	5			4A
225	11/27/2009	19:03	2	PDO	4	1	2	3	20				55	3	3			13A
220	11/27/2009	20:20	2	PDO	4	1	2	2	1				RA DE	5 7	7			12
295	11/29/2009	22:34	2	PDO	1	1	1	1	4				RE	7	7			12
84	11/30/2009	14:21	2	PDO	1	1	1	2	7				RA	3	3			11A
146	12/1/2009	21:35	2	PDO or NR	4	1	1	1	9	4			RE	6	6			5
13	12/2/2009	19:30	2	U	4	1	2	3	19				RE	3	3			5A
564	12/4/2009	15:00	2	NR	1	1	1	1	13				SS	7	7			12A
297	12/11/2009	8:30	2	PDO or NR	1	1	1	1	7				RA	3	5			12
431	12/11/2009	13:32	2	PDO or NR	1	1	1	1	4	x		x	RE	7	7			7A
298	12/13/2009	13:25	2	PDO or NR	1	3	4	4	26	60	61	26	SS	7	7			12
299	12/15/2009	7:55	2	NR	1	1	2	2	26				SS	1	1			12
484	12/15/2009	8:19	2	NR	1	1	2	2	4				RE	1	1			12A
119	12/16/2009	14:05	2		0	1	0	0	60	0	60			2	2			
173	12/18/2009	8:00	2	PDO	1	1	1	1	62 7	9	62			3	3			4
55	12/18/2009	15:00	2	INI	1	1	1	1	17	17			RA RA	7	5			9
120	12/23/2009	14:55	2	PDO or NR	1	1	4	4	66				SS	,	5			9A
147	12/31/2009	12:00	2	PDO	1	1	4	4	20	4			SS	7	7			5
450	1/2/2010	0:21	2	PDO or NR	4	1	4	4	66				RA	7	7			6A
441	1/3/2010	23:00	2	PDO	4	1	4	4				х	UNKNOWN	0	3			6A
121	1/4/2010	16:52	2	PDO or NR	3	1	2	1	9	19			RE	7	7			10
56	1/5/2010	13:30	2	INJ	1	1	2	2	18				RA	5	3			8A
1	1/5/2010	15:48	3	PDO	U	U	U	U					UNKNOWN	S				5
57	1/5/2010	16:03	1	INJ	1	1	1	1	11				FO	5				9
356	1/5/2010	16:39	2	PDO	4	1	4	1	9				RE	7	8			7
148	1/5/2010	U 19:40	0		U	U 4	U	U 4	10	<u> </u>				7	7			0 0
345 300	1/1/2010	16:49	2		4	ן כ	4	4	19	00				<i>1</i>	/ 2			o 12A
557	1/13/2010	18.40	2		<u>ح</u>	2	<u> </u>	2	13				55	∠ 3	3			124
357	1/14/2010	8:20	2	PDO	1	1	1	2	7	20			LT	3	3			7
301	1/20/2010	17:21	2	PDO	4	1	2	2	7				LT	8	5			12
302	1/22/2010	9:22	2	PDO or NR	1	1	1	1	4				SS	3	3			12
416	1/27/2010	9:23	2	PDO	1	1	1	2	20				SS	7	7			8A
333	1/28/2010	9:24	2	PDO	1	1	1	1	7	7			RA	6	7			8A
122	1/28/2010	17:56	1	NR	4	1	2	2					PED	3				10
58	1/29/2010	13:34	2	PDO	1	1	1	1	17		х		RA	7	1			9
59	1/31/2010	0:45	2	NR	4	1	1	1	17				RA	3	1			9

Time Period																		
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					suc	arac	fac											
From:		11/01/08	ے غ		ditio	Ġ	Sul			Apparent Con	tributing Factors		Туре		Dire	ection		
To:		10/31/11	< e	Severity	Con	vay	vay tion	ler										
No. of Months:		36	o. of	(NR, PDO,	ght e	padv	oad vondi	eath	19	20	21	22		V1	V2	V3	V4	
ID No.	Date	Time	ž	INJ, FAT)	Liĝ	Rc	8 C 2 C	M										Location
485	1/31/2010	1:30	5	PDO	4	1	1	1	20				OTHER	2	7	7	7	12A
334	1/31/2010	13:59	1	INJ	1	1	1	1	7	4		Х	PED	5				8
123	2/1/2010	12:51	2	PDO	1	1	1	1	7				RA	7	5			10
149	2/3/2010	14:52	2	PDO or NR	1	1	1	2	26				SS	7	7			5
553	2/6/2010	9:51	3	PDO	1	1	1	1	4	X		Х	OTHER	7	7	7		12A
568	2/8/2010	12:00	2	INJ/PDO	1	1	1	2	1	x			55	3	3			13A 12
303	2/11/2010	9:09	2		1	1	1	1	4				RA	3	2			12
150	2/12/2010	18:35	2	NR	1	1	1	1	3				RA RA	1	5			δA ΛΔ
336	2/16/2010	2:35	3	PDO	4	1	1	1	2	22		x	RF	7	7			8
151	2/18/2010	9:11	2	PDO or NR	1	1	1	1	9		9		RE	3	3			5
227	2/19/2010	21:13	3	PDO or NR	4	1	1	1	4				OTHER	7	7	7		13A
14	2/22/2010	14:45	2	PDO	1	11	1	2	3	4			SS	3	7			5A
152	2/22/2010	15:48	2	NR	1	1	1	1	3				RE	1	5			4A
60	2/25/2010	20:15	2	NR	4	1	2	3	3				RE	1	5			9
228	2/28/2010	11:03	2	PDO or NR	1	1	2	3	4		4		SS	3	3	ļ		14
96	3/2/2010	16:23	2	NR	1	1	1	1	4				RE	7	7			3
124	3/4/2010	9:38	2	PDO	1	1	1	1	13		18		SS	5	5			10
536	3/7/2010	0:06	1	INJ	1	1	1	2	7	4	4		PED	3	_			13A
436	3/8/2010	17:00	2	NR	3	1	1	1	13				SS	7	7			7A -
139	3/8/2010	18:30	3	INJ/PDO	4	1	2	3	60		60			5	3	3		5
270 522	3/10/2010	11:35	3		1	1	1	1	09 13	v	69		PED	3	3	3		5
358	3/12/2010	16:27	2		1	1	1	1	13	~			59 59	3	3	5		64
175	3/13/2010	22:26	2	PDO	4	1	1	2	7		26		RA	7	6			4
125	3/14/2010	6:59	2	PDO	2	1	2	2	4	17			RA	5	1			10
153	3/24/2010	8:15	2	NR	1	1	1	2	7				SS	3	3			5
359	3/26/2010	1:20	2	PDO	4	1	2	3		13	3		SS	7	7			7A
360	3/27/2010	17:47	2	NR	1	1	1	2	7	20			SS	7	7			7
229	3/29/2010	16:03	2	INJ/PDO	1	1	2	3	7				LT	8	3			13A
176	4/1/2010	12:20	2	NR	1	1	1	1	3	4			RE	7	3			4A
61	4/5/2010	15:10	2	PDO	1	1	1	2	7	5			LT	1	7			9
230	4/8/2010	10:32	2	PDO	1	1	1	1	9				RE	3	3			14
430	4/8/2010	15:25	2	PDO	1	1	1	1	13	4	3		RA	7	3	<b> </b>	ļ	7A
62	4/8/2010	16:38	2	PDO	1	1	1	1	7				RA	3	5			9
422	4/10/2010	18:49	2		1	1	1	1	3				KE DA	/ 7	3	}		7A 0
03	4/10/2010	21.UZ Q·//5	2	NR	4	1	1	1	7				ка 99	1	5 1			रू २
459	4/15/2010	17.00	2		1	1	1	1	13					3	3			54
454	4/16/2010	9:25	2	PDO	1	1	1	1	10		4	20	LT	3	3	1		7A
486	4/19/2010	0:00	2	PDO or NR	U	1	1	2	3		-		RA	3	1	1		12A
196	4/19/2010	3:54	4	INJ/PDO	4	1	1	1	2	4			OTHER	7	7	7	7	13
98	4/19/2010	10:00	2	PDO or NR	1	1	1	2			4		SS	3	3			3
126	4/20/2010	18:28	2	PDO	1	2	1	1			17		RA	7	1			10
64	4/21/2010	15:25	2	PDO or NR	1	1	1	1	9				RE	7	7			9
231	4/22/2010	23:05	2	PDO	4	1	1	1	7				LT	5	1	ļ		14
177	4/23/2010	16:00	2	PDO	1	1	1	1	20				RE	7	7			4A
232	4/24/2010	20:21	1	INJ	4	3	2	1			14	4	BIKE	7	1			14
178	5/4/2010	21:50	2	NR	4	1	1	1	3				RE	7	3	<b> </b>		4
154	5/6/2010	21:46	2	PDO	4	1	1	1	7				RA	3	5			5
197	5/8/2010	21:42	1	PDO	5	1	2	3	3	66			FO	5	4	4		13
65	5/11/2010	10:50	3	700	1	1	1	1	1/	62			RA	/	1	1		9

Time Period																		
						cter	<u>o</u>											
					suo	ara	rfac											
From:		11/01/08	ų.		diti	, G	ns / Su			Apparent Con	tributing Factors	r	Туре		Dire	ction	r	
To:		10/31/11	of Ve	Severity	Õ	lwa)	lwa) litior	ther	40	00	01				1/0	1/2		
No. of Months:	Dete	36	0	(NR, PDO,	ight	oad	oad	/eat	19	20	21	22		V1	V2	V3	V4	Location
	Dale	Time	Z	INJ, FAT)		<u>۳</u>	₩ O	>	10									Location
304	5/13/2010	8:02	2	INJ	1	1	1	1	18	4			LI	6	3			12
233	5/13/2010	11.15	2	PDO or NR	1	1	1	1	13	4			55 52	3				14
554	5/17/2010	16:05	2	PDO	1	1	1	1	4				SS	3	3			12
235	5/19/2010	18:05	2	PDO or NR	1	1	2	3	27		27		SS	7	3			14A
423	5/20/2010	19:03	1	NR	3	1	1	1			14		BIKE	1	3			7A
66	5/24/2010	10:55	2	INJ/PDO	1	1	1	1			7	4	LT	3	5			9
507	5/24/2010	18:00	2	PDO	1	1	1	1	4	62			RA	7	1			4
32	5/25/2010	15:20	2	NR	1	1	1	1	3				RE	3	3			4A
547	6/2/2010	14:53	2	PDO or NR	1	1	1	1	4				SS	3	3			13A
361	6/4/2010	12:40	4	PDO	1	1	1	1	17				OTHER	7	1	3	7	7
381	6/8/2010	15:30	2	PDO	1	2	1	1	4				SS	7	7			13A
67 205	6/8/2010	18:05	2	INJ/PDO	1	1	1	1	9		14		RE	3	2			9
305	6/17/2010	12:20	1 2		1	1	1	1	62		14		IT PED	/ 5	3			12 Q
198	6/18/2010	9.30 Q·10	2		1	1	1	1	9	¥			RF	7	7			13
236	6/19/2010	10:37	2	PDO or NR	1	1	1	1	13	^			SS	3	3			13A
69	6/25/2010	14:00	2	INJ	1	1	1	1	10		17		RA	7	1			9
127	6/25/2010	23:00	2	PDO	4	1	1	1	4				SS	3	3			10A
473	6/28/2010	16:55	2	PDO	1	2	1	2	7				SS	3	3			13A
306	6/28/2010	17:29	2	NR	1	2	1	1	4		4		SS	7	7			12A
307	6/29/2010	17:45	2	PDO	1	2	1	1	7				LT	6	3			12
179	7/2/2010	13:55	2	PDO	1	1	1	1	18	4			SS	3	3			3A
199	7/5/2010	22:50	2	PDO	4	2	1	1	4				RE	5	5			13
308	7/7/2010	14:21	2	INJ	1	1	1	1	18	7			SS	3	3			12
70	7/7/2010	17:36	2	PDO or NR	1	1	1	1	17				RA FO	5	1			9
25	7/8/2010	22:31	2		1	1	1	1	2				FU PE	7	3			3
99 277	7/13/2010	22:00	2	PDO	4	1	2	1	13				SS	7	7			5
362	7/16/2010	16:16	1	INJ	1	1	1	1	4		14		BIKE	1	7			7A
237	7/21/2010	12:58	2	NR	1	1	1	1	18				RE	8	1			14
337	7/24/2010	22:35	2	PDO	4	1	2	3	66		66	69	SS	3	3			7A
180	7/26/2010	9:00	2	NR	1	1	1	1	4	13			SS	3	3			3A
128	7/31/2010	12:00	2	PDO	1	1	1	1	4				SS	5	5			10
474	8/3/2010	13:15	2	PDO	1	1	1	1	4				RE	5	4			14
309	8/8/2010	15:00	2	INJ	1	1	1	1	4				SS	3	3			12A
338	8/10/2010	20:15	4	PDO or NR	4	1	1	1	7	17			HO	1	5			8
310	8/11/2010	11:11	2	INJ/PDO	1	1	1	1	7				RA	1	5			12
240	8/11/2010 8/17/2010	20:52	2		4	1	1	1	4					/ 7	/ 7			14
241	8/20/2010	9:00	2	NR	4	1	1	1	4				59 59	7	7			124
540	8/27/2010	0:05	2	PDO	5	1	1	1	4	7			SS	3	7			13A
129	8/27/2010	14:40	3	PDO	1	1	1	1	17				OTHER	3	5	1		10
311	8/28/2010	14:50	2	NR	1	2	1	1	7	20			SS	3	3			11A
181	9/4/2010	20:10	2	NR	1	1	1	1	9				RE	3	4			4
155	9/7/2010	13:00	3	INJ/PDO	1	1	1	1	9	42			OTHER	3	3	3		5A
312	9/7/2010	16:01	2	PDO or NR	1	2	1	1	4				SS	3	7			11A
182	9/8/2010	10:00	2	PDO	1	1	1	1	4	3			SS	0	3			4A
339	9/9/2010	17:24	2	PDO	1	1	1	2	26				RE	7	7			8
475	9/10/2010	21:45	2	PDO	4	1	1	1	13				SS	3	3			14A
476	9/11/2010	10:53	2	NR		1	1	1	4	7				4	3			14A
100	9/12/2010	12:34	۷	INJ	1	l l	1	۷	9				KE	1 1	l l			ა

Time Period																		
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					su	arac	face											
From:		11/01/08	Ċ.		Aitio	Che	Sur			Apparent Con	tributing Factors		Туре		Dire	ection		
To:		10/31/11	Veh	Severity	Sone	'ay	ay ion	er										
No. of Months:		36	oť	(NR, PDO,	U t	wbe	adw	ath	19	20	21	22		V1	V2	V3	V4	
ID No.	Date	Time	No.	INJ, FAT)	Lig	Ro	Cot	We										Location
71	9/14/2010	10:15	2	PDO	1	1	1	1	17	7			RA	3	1			9
101	9/15/2010	22:10	2	PDO or NR	4	1	1	2	9				RE	3	3			3
10	9/16/2010	11:50	2	PDO	1	1	1	1	4				RE	7	3			3A
72	9/17/2010	3:03	2	NR	4	1	2	2	18				SS	5	3			9
363	9/17/2010	12:15	2	PDO	1	1	2	2	3				RE	7	3			6A
130	9/18/2010	10:05	1	INJ/PDO	1	1	1	1			17		BIKE	3	5			10
131	9/18/2010	17:00	3	PDO or NR	1	1	1	1	4				SS	3	3	3		10A
313	9/19/2010	14:41	2	NR	1	1	1	1	9				RE	3	3			12
340	9/19/2010	18:19	2	NR	1	1	1	2	4				SS	5	5			8
314	9/19/2010	23:28	2	PDO	4	1	1	1	17			х	RT	3	1			12
156	9/20/2010	21:30	2	PDO or NR	4	1	1	1	4				RE	1	1			5A
315	9/23/2010	12:30	2	INJ/PDO	1	1	1	1	4				RA	7	5			12
316	9/23/2010	18:05	2	PDO or NR	1	2	1	1	20				SS	3	3			12A
73	9/24/2010	9:55	2	PDO or NR	1	1	1	1	17				RA	3	1			9
102	9/26/2010	0:38	2	PDO or NR	5	3	1	1	13				SS	7	7			3A
132	9/27/2010	8:15	2	NR	1	1	2	3	7				LT	7	3			10
341	9/27/2010	18:05	2	PDO	3	1	2	3	7	18			RA	5	7			7A
508	9/27/2010	19:21	1	INJ	4	1	2	3	4		14		PED	3				4A
85	9/28/2010	8:10	1	PDO	1	2	2	3	42				OTHER	5				10A
74	9/30/2010	8:05	2	PDO or NR	1	1	2	3	27				SS	3	3			9A
103	9/30/2010	20:44	2	PDO	4	1	2	3	4				RE	3	3			3
86	10/2/2010	16:45	2	PDO or NR	1	1	1	1	18			X	SS	4	4			11
133	10/4/2010	19:39	2		4	1	2	3	17					3	1	ł		
304	10/5/2010	6:45	2		2	1	2	2	0	66				7	0 7			
342	10/8/2010	0:45	2	NR	2	1	1	1	9	00			RE	5	5			8
134	10/9/2010	3.52	2		4	1	1	1	9				RE	5	5			10
561	10/10/2010	11:24	2	PDO	1	1	1	1	7		4		SS	3	3			12A
243	10/14/2010	11:07	4	INJ/PDO	1	1	1	2	7				OTHER	7	5	3	3	14
9	10/15/2010	16:16	2	PDO	1	1	2	3	4	5			SS	3	3			14
385	10/16/2010	1:00	2	PDO	4	2	1	1	64				SS	7	7			11A
516	10/16/2010	11:30	2	PDO or NR	1	1	1	2	4				RE	7	7			3A
407	10/19/2010	11:51	2	PDO or NR	1	1	1	1	7	69	х		LT	3	7			9
244	10/20/2010	19:29	1	PDO or NR	4	1	1	2	26	x			OTHER	5				14
477	10/20/2010	20:17	2	PDO	4	1	1	1	4	x			SS	7	7			14
378	10/21/2010	13:30	2	PDO	1	1	1	1	17				RA	7	5			12
537	10/22/2010	16:37	2	PDO	1	1	1	2	4				SS	3	3			13A
317	10/25/2010	8:25	2	NR	1	2	1	2			7		LT	3	6			12
135	10/27/2010	8:39	3	PDO	1	1	2	3			7		OTHER	3	5	1		10
245	10/29/2010	15:50	2	PDO	1	1	1	2	20	x	х	х	SS	3	3	ļ		14
75	10/29/2010	22:50	2	PDO or NR	4	1	1	1			5	4	LT	7	2			9
206	10/31/2010	16:30	2	NR	1	1	1	1	4				SS	7	7			12A
201	11/1/2010	14:54	2	PDO	1	1	1	2	9	4			RE	3	3	<b> </b>		13
136	11/3/2010	18:02	2	PDO or NR	3	1	1	1	4					7	1			10
87	11/4/2010	9:35	2	PDO	1	1	2	3	4				KE DE	(	(	<u> </u>		11
15/	11/12/2010	9:30	2	NK	1	1	1	1	4	9				3	3	<u> </u>		4A
158	11/12/2010	14:30	2		1	1	1	1	/ A					/	5			D 12
310	11/14/2010	4:20	2		4	1		۱ م	4					3	3 E	<del> </del>		64
10	11/17/2010	14:10	2		4	1	∠ 1	<u>ა</u>	4 7				CAKK CC	U 2	5	<del> </del>		74
127	11/10/2010	14.1U 22.15	2		1	1	1	<u> </u>	20	~	~	×	DE		7	<del> </del>		10
203	11/20/2010	1.20	2		4 1	1	1	1	20		Χ	Ă		1	1 2	3		14
200	11/20/2010	1.55	5		1 7	1	I	1	۷ ۲					5	J J	J J	I	די
Time Period																		
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						ter	0			•	•	•			•	•		
					suc	arac	fac											
From:		11/01/08	Ċ.		ditic	Ğ	Sur			Apparent Cor	tributing Factors		Туре		Dire	ection		
То:		10/31/11	Vel	Severity	ŭ	vay	vay tion	er										
No. of Months:		36	. of	(NR, PDO,	lht 0	adv	adv ndit	eath	19	20	21	22		V1	V2	V3	V4	
ID No.	Date	Time	No	INJ, FAT)	Lig	Ro	Ro Co	We										Location
344	11/22/2010	17:19	3	PDO or NR	4	1	2	3	18	4			OTHER	3	3	3		8A
138	11/29/2010	18:07	1	NR	4	1	1	1	7		14		PED	6				10
319	11/30/2010	14:11	2	PDO or NR	1	1	2	3	9				RE	1	1			12
455	11/30/2010	21:32	2	PDO or NR	4	1	2	2	4				SS	3	3			6A
392	12/1/2010	14:33	2	PDO or NR	1	1	2	3	4				SS	3	3			10A
366	12/1/2010	15:23	1	INJ	1	1	2	3	69		69	69	PED	1				7
528	12/9/2010	7:58	2	PDO or NR	1	1	1	1	26				HO	4	1			13A
88	12/9/2010	8:03	3	PDO	1	1	1	1	62				RE	3	3	3		11
76	12/11/2010	0:35	3	INJ	1	1	1	2	7				LT	3	7	7		9
77	12/12/2010	2:36	2	PDO	4	1	2	2	4				LT	6	7			9
278	12/12/2010	7:04	2	PDO or NR	2	1	4	5	66				OTHER	7	7			5
21	12/13/2010	17:37	2	PDO/INJ	4	1	1	2	9				RE	/	/			5
183	12/14/2010	8:15	2		1	1	4	4	1				RA	2	/		}	4
367	12/14/2010	16:25	1		3	1	2	1	4	0			PED	8	2			7
16	12/15/2010	8:00	2	PD0/INJ	1	1	1	1	69	9	60	7	RE	3	3	-		5
444	12/15/2010	9:50	2		1	1	1	1	69		69	/	RA	7	5			6A
78	12/21/2010	11:45	2		2	1	1		4		4		55	3	3			9
202	12/22/2010	15:51	2	PDO	3	1	1	2	18	7			LI	7	7			13
512	12/24/2010	4.07	2		4	1	2	2	18	/	1		55	7	7			7A 4A
33	12/28/2010	14.40	2		1	1	2	2	4					3	3			40
104	12/20/2010	18:25	2	NR	4	1	2	2	4	×				7	7			24
320	12/23/2010	23.22	2	PDO or NR	4	2	2	1	9	×			RF	3	3			12
320	1/6/2011	9.30	2		1	1	1	1	7	18				5	3			12
523	1/9/2011	1:28	2	PDO or NR	4	1	4	1	3	10			RF	7	3	1		4A
246	1/10/2011	11:15	2	PDO or NR	1	1	1	1	25	18			IT	4	1	1		14
426	1/13/2011	20:39	2	PDO or NR	4	1	5	1	7	10			SS	3	3			7A
517	1/20/2011	1:02	2	NR	4	1	4	4	4	х			SS	3	3			3A
437	1/26/2011	7:45	2	PDO	1	1	4	2	7				RA	1	3			7A
26	1/31/2011	18:15	2	U	4	1	1	1	18		х		LT	8	7			5
184	2/2/2011	16:20	2	PDO	1	1	4	2	7				RA	7	1			4
558	2/3/2011	6:45	2	PDO or NR	1	1	4	1	66				RE	7	7			12A
386	2/3/2011	12:55	2	PDO or NR	1	1	5	1	4				SS	7	7			11A
22	2/3/2011	14:00	2	NR	1	1	2	2	4		4		SS	3	3			U
458	2/3/2011	19:17	2	PDO	4	1	4	2	9				RE	3	3			5A
453	2/5/2011	13:44	2	PDO or NR	1	1	2	3	4				SS	3	3			6A
532	2/7/2011	7:38	2	PDO or NR	1	1	2	2	4				SS	5	1			14
391	2/9/2011	6:10	3	INJ/PDO	2	1	1	1			7	64	RA	3	1	3		11
408	2/9/2011	14:44	2	PDO or NR	1	1	4	1	4				UNKNOWN	0	3			9A
247	2/10/2011	8:25	2	PDO	1	1	1	1	62		7		LT	36				12
509	2/12/2011	16:43	2	PDO or NR	1	1	2	1	4	62			RA	5	7			4A
28	2/23/2011	7:40	1	INJ	1	1	1	1	7	62			PED	1				4
419	2/26/2011	0:00	2	PDO or NR	4	1	4	4	66				UNKNOWN	0	3			8A
238	2/27/2011	9:36	2	INJ/PDO	1	1	2	1	7				RA	1	7			7
249	3/3/2011	17:51	2	PDO	4	1	1	1	7				LT	6	3		ļ	12
456	3/4/2011	12:45	2	PDO	1	1	1	1	4	66			LT	3	7		ļ	5A
466	3/8/2011	20:51	2	PDO or NR	4	1	2	2	4				SS	3	7		ļ	14
549	3/10/2011	18:16	2	PDO or NR	4	1	2	3	7	x			LT	5	7		<b> </b>	13A
520	3/12/2011	0:00	2	PDO	U	1	U	2	4	X			SS	7	7		<b> </b>	3A
409	3/15/2011	6:58	2	NR	2	1	1	1	17	19	<b> </b>		RA	5	3	ł	<b> </b>	9
440	3/15/2011	7:30	2	NR	1	1	1	1	13	x	<b> </b>		SS	3	3	ł	<b> </b>	6A
397	3/16/2011	10:58	2	PDO or NR	1	1	2	3	3				HO	3	3			9A

Time Period																		
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					su	arac	face											
From:		11/01/08	÷		ditic	Ch	Sur			Apparent Con	tributing Factors		Туре		Dire	ection		
To:		10/31/11	Vel	Severity	Con	vay	vay tion	er										
No. of Months:		36	. of	(NR, PDO,	pt 0	adv	adv	eath	19	20	21	22		V1	V2	V3	V4	
ID No.	Date	Time	Να	INJ, FAT)	Lig	Ro	Ro Co	We										Location
260	3/21/2011	19:40	2	PDO or NR	4	1	2	3	20				SS	7	7			9
421	3/25/2011	15:46	2	PDO or NR	1	1	1	1	4				SS	5	5			8
533	3/26/2011	19:17	2	PDO	3	1	1	1	4				LT	8	3			13A
254	3/27/2011	18:48	2	INJ	3	1	1	1	4				RE	7	7			8
261	3/30/2011	14:58	1	NR	1	1	1	1	3				BIKE	7	3			9
272	3/31/2011	11:51	3	INJ/PDO	1	1	1	1	7				OTHER	5	3	3		10
262	4/1/2011	6:42	3	INJ/PDO	2	1	2	4	17	10			OTHER	3	1	3		9
506	4/3/2011	18:15	2		1	1	1	1	/	18			55	7	/			4A
505	4/4/2011	19:03	2		1	1	2		3	60			55	7	3			4A
250	4/7/2011	18:50	2		1	1	1	1	02	09			DE	3	7			12
205	4/7/2011	6:53	2	PDO or NR	1	1	1	1	18	17			RT	7	7			3
489	4/12/2011	17:57	2	PDO	1	1	1	1	4				RT	5	7	1		14
525	4/26/2011	9:15	2	PDO or NR	1	1	2	2	3				RA	4	1	1		14
413	4/26/2011	12:33	2	PDO or NR	1	1	1	2	4				RE	3	3	1		9
268	4/26/2011	23:33	2	PDO	4	2	2	3	9	15			RE	7	7			11
255	4/27/2011	18:25	1	INJ	1	1	2	3			17		BIKE	7	5			8
467	5/3/2011	9:00	2	PDO or NR	1	1	1	2	7	69	13		LT	4	3			14A
263	5/6/2011	15:23	2	INJ	1	1	1	1	9				RE	7	7			9
35	5/8/2011	13:02	2	U	1	1	1	2	69	х		х	RT	3	7			U
487	5/9/2011	8:51	2	PDO or NR	1	1	1	1	4				LT	3	7			14
264	5/10/2011	17:18	2	INJ	1	1	1	1	9	4			RE	3	3			9
29	5/12/2011	17:52	2	U	1	1	1	1	13				SS	3	3	_	_	4A
251	5/16/2011	23:40	5	PDO	4	1	2	3	17	10			OTHER	7	1	7	7	12
265	5/19/2011	0:05	2		4	1	2	3	9	13			55	3	3			8
274	5/21/2011	19:29	1		1	1	2	2	17				BIKE	5	1			14
538	5/25/2011	17:45	2		1	1	1	1	13				RT	4	3			134
252	5/26/2011	15:52	2	NR	1	1	1	1	4	×			SS	3	3			12
560	5/28/2011	4:09	1	INJ	4	1	1	1	28	~			PED	3	0			12A
8	6/3/2011	17:52	2	PDO/INJ	1	1	1	1	7				LT	2	7			13
266	6/8/2011	8:00	2	PDO	1	1	1	2	17				RA	1	7			9
267	6/11/2011	15:42	2	PDO or NR	1	1	2	3	4				SS	7	7			9
534	6/15/2011	16:07	2	PDO or NR	1	1	1	1	7	x			RA	5	3			14
253	6/16/2011	12:42	2	NR	1	1	1	1	13	x			SS	3	3			12
2	6/16/2011	16:44	2	PDO	1	1	1	1	4				RE	4	3	ļ		12A
273	6/18/2011	20:08	2	PDO	3	1	1	1	7				RA	6	3	ļ		5
394	6/23/2011	12:49	3	PDO	1	1	2	3	60				OTHER	3	3	3		10A
490	6/24/2011	22:25	3	PDO	4	1	2	2	9				RE	3	3	3		14
539	6/27/2011	13:10	2		1	1	1	1	13				55	3	3			13A
390	7/6/2011	11:00	2		1	1	1	2	20				55	3	3	}		1UA 2A
010 256	7/19/2011	10.00	2		2	1	1	1	4 7	X 12			33 99	3 7	3			8
250	7/30/2011	8.40	2		1	1	1	1	, Д	13			22	7	7			13
270	7/30/2011	14:30	2	PDO	1	1	1	1	4	7			RT	7	7			4
464	7/30/2011	16:35	2	PDO or NR	1	1	1	1	7				SS	7	3	1		14
491	7/31/2011	1:15	2	PDO or NR	4	1	1	1	7				LT	5	3	1		14
428	7/31/2011	4:55	3	PDO	2	1	1	1	47				OTHER	3	3	7		7A
403	8/1/2011	16:05	2	PDO or NR	1	1	1	1	4				RE	3	3			9A
535	8/6/2011	18:31	2	PDO	1	1	2	3	4	5	x	x	SS	3	3			13A
563	8/8/2011	14:30	2	PDO or NR	1	1	1	1	4				RE	7	7			3A
258	8/19/2011	13:46	2	PDO	1	1	1	1	17				RA	1	7			9

Time Period																		
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89	8/26/2011	2:19	2	PDO	4	2	1	2	4	20			SS	3	3			11
248	8/30/2011	8:42	3	PDO	1	2	1	1	17				OTHER	7	1			12
239	8/31/2011	14:30	2	NR	1	1	1	1	45		х		SS	7	7			7A
526	9/1/2011	18:56	2	PDO or NR	1	1	1	1	4	13		х	SS	7	7			14
544	9/2/2011	13:15	2	INJ	1	1	1	1	9				RE	7	7			14
434	9/2/2011	14:20	3	PDO	1	1	1	1	9				RE	3	3	3		7A
380	9/6/2011	22:58	2	PDO or NR	4	3	2	3	4				RE	7	3			11A
257	9/9/2011	11:24	2	INJ/PDO	1	1	1	1	4	9			RE	7	7			7A
379	9/9/2011	16:45	2	PDO or NR	1	1	1	1	4				SS	3	3			11
504	9/19/2011	17:08	2	PDO or NR	1	1	1	1	4				SS	7	7	<b> </b>		4A
488	9/22/2011	17:23	1	INJ	1	1	1	1	_		14		PED	7				5
406	9/23/2011	17:31	2	PDO	1	1	2	3	7				SS	3	3			8A
529	9/29/2011	16:15	2	PDO	1	1	2	3	3				RE	1	5			13A
259	10/2/2011	18:18	2	PDO	3	1	1	1	13				SS	7	7			9
461	10/11/2011	19:33	1	INJ	4	1	1	1	/	4			PED	/				5A
500	10/16/2011	18:45	2	NR DD0//NLL	3	1	1	1	/	X	20	X	55	3	3			4A
18	10/21/2011	8:19	2	PD0/INJ	1	1	1	2	4				RE	3	3			5
442	10/24/2011	14:30	2		1	1	1	2	69					5	3	-		6A 12A
204	10/28/2011	1:19	2	PDO of NR	4	1	2	3	2				KE	3	3			13A
Accident Type I	egend				Contributing Fa	ctors Legend												
FO - Fixed Obje	ct				2 = Alcohol Invo	olvement		14 = Pedestrian/Bicyclist Confusion										
RE - Rear End					3 = Backing Un	safely		15 = Physica	al Disability									
RT - Right Turn	(against other vel	hicle)			4 = Driver Inatte	ention		16 = Prescri	ption Medicati	on								
LT - Left Turn (a	gainst other vehic	cle)			5 = Driver Inexp	perience		17 = Traffic Cor	htrol Disregarded									
RA - Right Angle	9				7 = Failure to Y	ield Right-of Way	(	18 = Turning Im	nproperly									
SS - Sideswipe					8 = Fell Asleep			19 = Unsafe Sp	beed									
HO - Head On					9 = Follwing To	o Closely		20 = Unsafe La	ne Change									
BIKE - Bicycle					11 = Lost Conse	ciousness		21 = Fatigued/E	Drowsy									
DEER - Deer					12 = Passenger	r Distraction		25 = Outside Ca	ar Distraction									
ANIMAL - Anima	al				13 = Passing or	r Lane Usage Imp	proper	26 = Reaction t	o Other Uninvolve	ed Vehicle								
OVT - Overturne	ed																	
FIRE - Fire/Expl	osion																	
ROR - Ran off F	load																	
OTHER - Other																		
UNK - Unknown																		
PED- Pedestria	1																	

Appendix C

# **Traffic Volumes**

Madison Avenue Road Diet Feasibility Study City of Albany, Albany County, New York













# Appendix D

# **Stakeholder and Public Involvement**

Madison Avenue Road Diet Feasibility Study City of Albany, Albany County, New York

#### Madison Avenue Traffic Study / Road Diet Feasibility Study Stakeholder Meeting Wednesday, July 11, 2012 at 3:00 The College of Saint Rose Touhey Forum in the Lally School of Education Meeting Summary

The City of Albany has commenced a traffic study to evaluate the feasibility of implementing a road diet along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. A meeting was held on July 11, 2012 to engage the stakeholders along the corridor. The purpose of the meeting was to obtain input on the corridor issues and alternatives before starting the detailed feasibility analysis. The stakeholder meeting was announced by an email flyer and invitation. The sign-in sheet is attached.



The stakeholder meeting began with a welcome from Bill Trudeau and a brief presentation by Jeff Pangburn and Mark Sargent of Creighton Manning. The presentation included a project introduction, existing conditions discussion, and identification of three potential road diet alternatives. A copy of the PowerPoint presentation is attached. At the conclusion of the presentation Jeff Pangburn facilitated a question/answer session. Comments and questions received from meeting attendees are divided by topic and include the following:

- Pedestrians
  - What type of accommodations will the alternatives look at (complete streets, ADA, sidewalks, etc.)?
  - The study will identify intersections that need pedestrian upgrades.
  - This is a heavily used pedestrian corridor.
- Cyclists
  - Cyclists may currently avoid Madison because there's "no room".
  - The study should consider a protected bikeway.
  - Cyclists know that car doors can open into their space (this may be a trade-off for various alternatives).
  - Protected bikeways can be costly and hard to maintain.
- Transit
  - The use of bus pull-ins and bump-outs makes a difference in whether vehicles stop behind a bus or can go around.
  - The CDTA ridership numbers cited in the presentation may be low because Saint Rose was closed for one week during March.
  - Route 114 has good ridership.
  - Bus pull-ins can become a "trap" for buses and sometimes the tail of the bus can extend out into the travel lane.

- Parking
  - Is angled parking an option?
  - Angled parking may not be as safe of a parking option for bicyclists.
  - The alternatives should maintain as much on-street parking as possible.
  - Parking should be provided on both sides of the street.
- Passenger Vehicles
  - The study needs to consider traffic re-routing to adjacent/parallel routes as a result of changing Madison.
  - The AADT on Western Avenue needs to be confirmed.
- Safety
  - Car to car conflicts are abundant in the corridor and improving the condition would be good.
  - Madison/Main is dangerous speeds are high.
  - One of the benefits of a road diet is slowing down traffic.
- General
  - This is the first project of this kind in the City and is a key piece in Albany's Bicycle Master Plan.
  - There is currently no construction budget to implement study recommendations.
  - The curb to curb width of the corridor is 57 feet.
  - The intersection of Western/Manning is part of a current project and the recommendations/plans will be integrated into this study.
  - There are no plans for curb re-alignment as part of this study.
  - The study should look at multiple treatment options.
  - Anecdotally, business owners think that it's easier for pedestrians to cross the street to their shops, slower traffic will allow vehicles to see their businesses more easily, and truck deliveries near Lark may be difficult with a road diet.
  - The study should provide a comparison to Clinton Ave.
  - State Street (with the road diet) is better now that it used to be.

The next steps in the study are to confirm the alternatives and evaluate the alternatives across a range of criteria including dimensions, operations, accidents, etc.. Draft findings and recommendations will be developed by early Fall.

# Stakeholder Meeting

July 11, 2012 3:00 p.m.

<b>Name</b>	Representing	Phone	Three 11
PAUL K MILLER	HUDSON PARK NA	7274/11	Hei KENTENOR 43/4 Millor Com
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BILL LACUYER	CITY of ALGANY DIV of KNO	434-5670	LEENALWOCI, ALBANEY, NY, US
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Leah Gola	Common Council	438-1244/209-1	244 Leah. Golby @amil. con
Dominick Calialaro	Common Council	8-7-5219	degleslers BNKERS. Fr. Com
Joe 190e	11	489-3014	i goe 19932 C gol, com
Brendan Cox	Albert PD	462. 8009	bode albert-out as
RANDY Fitch	CDTA	437-8370	Vandu E a CATA ala
Ross Farrel	CDTA	437-6866	Coss F@Cato.org
Jim Moore	y, Aloony	442-3400	imoore to album edil
Andrew Weiss	U Albarky	442-3456	aweiss @ albany. edu

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CDTC

454-5115 dat tilimæstrose, edu 154-5216 buchleymæstrose. edu 454-5139 stellasæstrose, edu 610-304-0952 cohodge zggmail.com 458-2161 smisiecuicz@catempo.org



#### **Meeting Agenda**

- Presentation Project Overview
  - Study Area
  - Project goals and purpose
  - Existing conditions
  - Preliminary alternatives
- Stakeholder input
- Next steps



# Project Goals and Definition • Provide an assessment of the feasibility, costs, benefits, and impacts of a road diet on Madison Avenue

Road Diet Road After
 Evaluate 3 alternatives considering bicycles,
 pedestrians, transit, parking, safety, and passenger
 vehicle operations



Traffic Volumes									
Location ADT Peak Hour Volumes (2-way)									
		AM	Off	PM					
St. Rose to Partridge	14,900	970	930	1,230					
Quail to S. Lake	13,400	920	800	1,090					
S. Lake to Robin	14,400	1000	880	1,260					
New Scotland to Willett	13,700	880	840	1,000					

- Daily traffic volumes through the corridor are generally consistent
- PM peak hour traffic volumes are slightly higher than AM and off peak volumes

#### **Street Volume Comparison**

- 3-lane section
  - State Street (Schenectady): 13,500 vpd to 16,000 vpd
  - Fuller Road: 24,500 vpd
  - Broadway (Menands): 9,000 vpd
  - Loudon Road: 19,000 vpd
- 2-lane section
  - Western Avenue: 6,500 vpd
  - Loudon Road: 15,250 vpd



#### East Boulevard – Charlotte, NC

- 4 to 3 lane road diet
- 21,400 ADT before and 22,000 ADT after
- Speed reduction from 43 to 40 mph
- Safer pedestrian environment with shorter crossings and pedestrian refuge islands
- Improved bicycle accommodations





#### **Bicycles**

- Bicycle volumes range in the corridor
  - AM = up to 15 bicycles per intersection
  - Off = up to 11 bicycles per intersection
  - PM = up to 23 bicycles per intersection
- Bikes share the road with vehicles



#### Pedestrians

- Sidewalks are available throughout the corridor
- Pedestrian crossings vary
   Crosswalks
  - Some pedestrian signals with timers
  - Push buttons
- ADA ramps and detectorsPedestrian activity was
- observed throughout the corridor with highest volumes at Lark St.



#### Transit

- CDTA Neighborhood Routes 63 and 114
  - 28,500 riders in March '12
  - Route 63 serves the area during commuter hours
  - Route 114 travels the corridor once every 50 minutes.
- Transfers to other neighborhood and commuter routes at Allen St, Main St, Quail St, New Scotland Ave, and Lark St





#### Travel Speeds and Level of Service

ound
5
0
2

• Arterial Level of Service (LOS C/D)

#### **Accident Review**

- 481 accidents on the corridor
  - 270 at intersections
  - 204 along segment
  - 7 unknown
- Environmental Conditions
  - 58% clear weather
  - 70% dry pavement
  - 64% daylight
- Collisions of a type correctible by a road diet
  - 24% rear end
  - 31% sideswipe
- 7% (32 crashes) involving pedestrians or bicycles
- Contributing factors
  - driver inattention (27%)
  - failure to yield right-of-way (18%)

#### **Possible Alternatives**

- Do Nothing (Null)
- 3 lanes with shared use lane and parking
- 3 lanes with bike lanes and parking
- 2 lanes with bike lanes and parking



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#### Schedule / Next Steps

#### ✓ Phase 1

- ✓ Project Initiation
- $\checkmark$  Existing Conditions
- ✓ Stakeholder Input
- Phase 2
  - Alternatives Development
  - Analysis
  - Draft Findings
  - Stakeholder Input
  - Recommendations & Report



#### Madison Avenue Traffic Study / Road Diet Feasibility Study Stakeholder Meeting #2 Thursday, February 28, 2013 at 3:00 The College of Saint Rose Touhey Forum in the Lally School of Education Meeting Summary

The City of Albany has commenced a traffic study to evaluate the feasibility of implementing a road diet along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. A meeting was held on February 28, 2013 to engage the stakeholders along the corridor. The purpose of the meeting was to present the draft findings of the study and obtain input on the corridor recommendations. The stakeholder meeting was announced by an email flyer and invitation. The sign-in sheet is attached.

The stakeholder meeting began with a welcome from Bill Trudeau and a brief presentation by Jeff Pangburn and Alanna Moran of Creighton Manning. The presentation included an overview of the project, review of Stakeholder Meeting #1 and the Albany Bicycle Coalition meeting, and presentation of the draft findings and recommendations of the feasibility study. A copy of the PowerPoint presentation is attached. At the conclusion of the presentation Jeff Pangburn and Alanna Moran facilitated a question/answer session.

The study focuses on the five alternatives to determine feasible road diet alternatives. Due to roadway width restrictions and the need to accommodate turning traffic, other alternatives were considered "not feasible".

- Alternative 1: Existing roadway configuration and planned signal improvements
- Alternative 2: 3-lane roadway through entire corridor without signal coordination
- Alternative 3: 3-lane roadway through entire corridor with signal coordination
- Alternative 4: 3-lane roadway along Madison Avenue without signal coordination
- Alternative 5: 3-lane roadway along Madison Avenue with signal coordination

The analysis shows that Implementation of a Road Diet just along the Madison Avenue portion of the corridor with no signal coordination (Alternative 4) may be feasible, however, increased vehicle delays will be apparent. Including signal coordination in the project (Alternative 5) minimizes adverse impacts and brings vehicle delays closer to existing conditions. Alternative 5 is considered feasible. Alternatives 2 and 3 (road diet extending onto Western Avenue) are not feasible due to the sheer traffic volume and delays that would result from a road diet in this section.

There are three general roadway layout options for a road diet on Madison Avenue:

- Option A: Shared Travel Lane for bicycles and vehicles.
- Option B: Shared Parking Lane in which there is a wide parking lane for bicycles and parked vehicles.
- Option C: Exclusive Bike Lane in which vehicles, bicycles, and parked vehicles each have delineated space.



**Option A: Shared Travel Lane** 





Option B: Shared Parking Lane

**Option C: Exclusive Bike Lane** 

Although all three of these options appear feasible, Options B and C would require some concession on desirable lane widths (center turn lane should be 11 feet wide and the parking lanes should be 8 feet wide).

None of the three options meet all of the stakeholder goals, but are deemed to provide adequate bicycle accommodation on this roadway. Option A is consistent with recent pavement marking projects throughout the City with the use of Sharrows to indicate that cyclists share the travel lane with motorized vehicles. Option B shifts the bicycle accommodation into a shared parking lane, separating the bicycles from the travel lane but placing them against parked vehicles. Option C provides for exclusive delineated bicycle lanes but again places bicyclists against parked vehicles.

Comments and questions received from meeting attendees are divided by topic and include the following:

- Pedestrians
  - Is anything being done with bump-outs and raised crosswalks?
- Cyclists
  - League of American Bicyclists would not teach people to ride in the door zone
  - We need to be talking to people who aren't cycling right now, those who are afraid aren't using it
  - Bicyclists cannot be ticketed for not riding in their bike lane
- Transit
  - Isn't there delay associated with waiting behind the bus?
  - Bus activity would need to be addressed in detailed design
- Parking
  - Can diagonal tick marks be used for parking lane delineation?
- Safety
  - If the road diet goes in will there be an increase of accidents or wrong lane usage?
  - Good flow would create less desire for people to run the red lights
  - Is there potential for implementation of speed stripes?
  - Manning has definitely shown a traffic calming/speed reduction with the road diet
  - What's to keep this from being used as 2 lanes? (Alt A)
- Other Alternatives
  - What about a bikeway?
  - Did you think about putting the bike lane in the center of the road?
- General
  - The performance of the corridor and the chosen alternative shouldn't be driven by only bicycle accommodations
  - Will a white lane line mean slower vehicles?
  - Is there a benefit to using consistent symbols?
  - Is the Lark Street BID represented?
  - The lane line really makes people drive differently
  - Don't want to feel a false sense of security
  - What is Clinton Ave like?
  - What do other local communities have?
  - I like A

The next steps in the study are to present the draft findings to the public and finalize the feasibility study. The public meetings are scheduled for March 25, 2013.

# Stakeholder Meeting #2

February 28, 2013 3:00 p.m.

Name	Representing	Phone	Email
DOMINICK Calso Gro	GAMON (OUNCI)	859-5219	dealsolaro @ Axisp. MR ()
Kaylee Pagano	Pine Hills Blog	585-507-7431	paganokossostrose. edu
VIRGINIAHAMMER	PHNA - ACTING PRES	438-0195	vhammer@qmail.com
Margaret Lanoue	self	482-1809	margaretlanone & John . com
Marc Violette	self	482-1809	marc. violette everizon, net
Bob Pistilli	Albary Med	262-8285	pistilb@ mail. amr. edu
JOHN HAMMER	PINE HILLS NEIGHBORHOOD ASK.	438-0195	HANNEJ@GHAIL.COM
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Doe loop	Common Council	489-3014	jigoe/9932@ao/
KANDY Fitch	CDTA	281-5757	Pandy FOCDTA, 019
Amy Jusaitis	Self	489-9066	amy feryerp. r. con
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ERRUL MILLINGTON	UNLDON	442-3400	EmilyTON CARM. FOL
Borna Jahan	V Albany	515-7034610	9 Jabari . Dorna @ gmail. Cc
Jm Shind	- RBC	4366592	Jacques much s Cognal w

COTA 437-6866 Ross FG Cdto.org Ross Forrell Sandy Misieuricz Bert Schon CDTC 458-2161 Smisiewicz @coltempo.org bet. \$9\$355 Cgma. 1. com 2278693

# Stakeholder Meeting #2

February 28, 2013 3:00 p.m.

Name	Representing	Phone	Email
LORENZ WORDEN	Alb Bicycle Corton	h 489-0866	OVENZ-WONDER DUENIZON N
MARCUS BUCKLEY	THE COLLEGE OF SAINT ROSE	454-5216	buchlerme strose. edu
Becky Puntz	Downtibe usele workst mohawk hisson cycling cills	607-287-1962	beckypuritz@gmail.com
BILL SWEET	PRICE CHOPPER	379-1251	WILLIAMSWEET @ PRICECHOPPER. Com.
Joseph Acavaviva	Albany P.D.	418-5660	jacqueriva @ albany - NY .059
Kate Lawrence	COA DDA	434-2532 ×17	lewrence KQC: albany, ny. us
Doug Melnick	COS DDR		melnick do ci. albany, ny, us
Thil Hansen	me	482-9131	hansenpd @ earthlink, net



#### Why are we here today?

- Update since last meeting
- Present DRAFT Report findings
- Obtain input on recommendations





- Cyclists
- Transit
- Parking
- Passenger vehicles
- Safety



#### Follow up Meeting Recap

- Meeting with Bike Coalition held on August 10, 2012
- Discussion centered on bike treatment options
  - The roadway width is a limiting factor
  - Curbside transit conflicts with bike lanes
     Potential to create buffer
- between bike and parked cars? Should a parallel roadway be
- used as the "preferred" bike route?



#### Project Goals and Definition

• Evaluate the feasibility of a road diet on Madison Avenue





• Consider bicycles, pedestrians, transit, parking, safety, and passenger vehicle operations

#### **Potential Advantages and Disadvantages**

#### **Advantages**

- Space for bicycles
  Traffic calming/reduced travel speeds
- Less traffic noise
- Crash reduction

#### Disadvantages

#### isauvantages

- Increased vehicular delay, notably side-street approaches
- More difficulty turning in and out of driveways
- Increased transit travel times
- Greater interference of double parked vehicles

#### **Critical Success Factors**

- Maintaining the existing curb lines
- Allowing sufficient opportunities for turning vehicles to enter and exit mainline traffic
- Maintain parking on both sides of Madison
   Avenue
- Strive to provide standard lane widths

#### **Existing Roadway Geometry**



#### **Existing Conditions**

- Corridor traffic volumes range from 13,400 to 14,900 vpd
- Travel speeds range from 15 to 18 miles per hour resulting in arterial LOS C/D conditions
- 481 crashes occurred on the corridor with about 55% of a type correctible with a road diet



#### **Existing Conditions**

- Bicycles share the road with vehicles.
- Intersection bike volumes range from 11 to 23 bikes per hour
- Pedestrian activity and conditions vary through the corridor with the highest volumes at Lark Street.
- Transit routes 63 and 114 served 28,500 riders in March of 2012







Operational Comparison									
Criteria	Null	Null Full Road Diet		Partial Road Diet					
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5				
Total Delay (hours)	132	369	337	171	146				
Average Speed (mph)	13	6	7	11	12				
Arterial LOS	E	F	F	E	E				
Performance Index	174	416	376	217	184				
Bike Benefit	No	Yes	Yes	Yes	Yes				
Accident Benefit	No	Yes	Yes	Yes	Yes				













5. Provide new vehicle detection



# Schedule / Next Steps Phase 1 Project Initiation Existing Conditions Stakeholder Input Phase 2 Alternatives Development Analysis Draft Report Stakeholder Input Public Information Meeting Final Recommendations



#### Madison Avenue Traffic Study / Road Diet Feasibility Study Public Meeting Tuesday, April 16, 2013 at 11:00am & 6:30pm The College of Saint Rose Touhey Forum in the Lally School of Education Meeting Summary

The City of Albany prepared a DRAFT traffic study that evaluated the feasibility of implementing a road diet along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. Two identical meetings were held on April 16, 2013 to engage the

general public, and to receive feedback on the study and the draft findings and recommendations. The meetings were announced by an email flyer and invitation. The sign-in sheets are attached.

The public meetings began with a welcome from Bill Trudeau and a brief technical presentation by Mark Sargent and Alanna Moran of Creighton Manning. The presentation included an overview of the project, review of previous meetings, and presentation of the draft findings and recommendations. A copy of the PowerPoint presentation is attached. At the conclusion of the presentation Mark Sargent and Alanna Moran facilitated a question/answer session.



The study focuses on five basic alternatives to determine the feasibility of a road diet in the study area. Due to roadway width restrictions and the need to accommodate turning traffic, other alternatives were considered "not feasible" and dismissed prior to quantitative evaluation. The following alternatives were evaluated in detail:

- Alternative 1: Existing roadway configuration and planned signal improvements
- Alternative 2: 3-lane roadway through entire corridor without signal coordination
- Alternative 3: 3-lane roadway through entire corridor with signal coordination
- Alternative 4: 3-lane roadway along Madison Avenue without signal coordination
- Alternative 5: 3-lane roadway along Madison Avenue with signal coordination

The detailed analysis shows that implementation of a road diet along the Madison Avenue (Alternatives 4 and 5) portion of the corridor is feasible. However, without signal coordination (Alternative 4) increased vehicle delays will be apparent. Including signal coordination in the project (Alternative 5) minimizes adverse impacts and brings vehicle delays closer to existing conditions. While Alternatives 4 and 5 are both feasible, Alternative 5 is preferred. Alternatives 2 and 3 (road diet extending onto Western Avenue) are not feasible due to the traffic delays that would result from a road diet in this section.

There are three general roadway layout options for a road diet on Madison Avenue:

- Option A: Shared Travel Lane for bicycles and vehicles.
- Option B: Shared Parking Lane in which there is a wide parking lane for bicycles and parked vehicles.
- Option C: Exclusive Bike Lane in which vehicles, bicycles, and parked vehicles each have delineated space.



Option A: Shared Travel Lane





Option B: Shared Parking Lane

**Option C: Exclusive Bike Lane** 

Although the preliminary evaluation indicates that all three of these options are feasible, Options B and C would require some concession on desirable lane widths (center turn lane should be 11 feet wide and the parking lanes should be 8 feet wide).

None of the three options meet all of the study goals, but all options provide improved overall safety and bicycle accommodations over the existing four-lane roadway. Option A is consistent with recent pavement marking projects throughout the City with the use of Sharrows to indicate that cyclists share the travel lane with motorized vehicles. Option B shifts the bicycle accommodation into a shared parking lane, separating the bicycles from the travel lane but placing them against parked vehicles. Option C provides for exclusive delineated bicycle lanes but again places bicyclists against parked vehicles.

General comments and questions received from meeting attendees are divided by topic and include the following:

- Pedestrians
  - How are pedestrian accommodations being improved?
- Cyclists
  - League of American Bicyclists would not teach people to ride in the door zone
  - Option A is the "safest"
  - Cyclists like Option A because it reduces potential for dooring
  - Commenter liked A or C
  - · Option C would create a condition where new cyclists would use the road
  - Has one striping option been proven to be safer than other options?
  - If the project doesn't include "protected" bike lanes then this is a missed opportunity
  - Was detection for bicycles considered?
- Transit
  - Has CDTA been involved in the study?
  - Were park and rides considered anywhere to encourage more transit use?
- Parking
  - There should be some markings to specifically show where parked cars should be so that they don't take up more than their share of space
  - What about diagonal parking?
- Safety
  - If the road diet goes in, will there be an increase of accidents associated with parking vehicles?
  - Good flow would create less desire for people to run the red lights
  - Manning has definitely shown a traffic calming/speed reduction with the road diet
  - What's to keep this from being used as 2 lanes? (Option A)
  - · What happens if there are significant generators across the roadway from each other?
- Other Alternatives
  - Did you think about putting the bike lane next to the curb and having the parked cars as a buffer?
- General
  - Preference for Alternative 5. If the road diet is implemented then it should definitely include the signal timing/coordination updates.

- Commenter had no preference for A, B or C, but noted Alt 5 is only answer. Alt 4 not acceptable.
- Police department enforcement of speeds in the corridor is really important.
- What are the timetables and deadlines for funding and what would the funding source be?
- How does this compare to Clinton Avenue? Clinton Ave seems to have good door zone safety.
- Can anything be done at the Western/Madison/Allen intersection?
- How will the road diet work at the New Scotland Avenue intersection where there is a lot of traffic volume Can an eastbound right turn lane be included on Madison at New Scotland?
- How will the transitions between the roadway geometries work? What will they look like?

The next step in the project is to finalize the draft report and recommendations for the feasibility study.

## **Public Meeting**

April 16, 2013 11:00 a.m.

Name	Representing	Phone	Email
Becky Puritz	Downtube Bicycle Works +	607-287-1962	beckypuritz Ognail. con
0	Mohawik Hudson Cycling Club		
Bicc Phillips	New ALBONY neghter Assoc	518-527-1242	Wighilligs 99 @ SMAIL. Com
John Major	0	5183561835	jmajor 1 Qnycap. M. com
DICK MELITA	RESIDENT	518.438-8304	RMELITA QNYCAP, RR. COM
Unite Ames	Self Strant	518 462-4698	EU LAMES @ QOL. COM
MIKE DIROF	RESIDENT		mike@dirolf.com
Leif Engstrom	City Auditor's Office	518.434.5023	engstrom/ @ earthlink.net
Sophia Abbasi	Kathy Sneehan	518-390-7012	Sophia @ sheehanfor albany, com
Lever Colley	Common Connal	518-209-644	Leah. Golby @ Gmail. com
Domwick Caliboro	Common Contrail	5788-5-5219	dealsolarog NYEGO, SC. Con
Daniel Plant	Occupy Albany - Self	518-396-6122	dolaot (Dyahoo Kom

## **Public Meeting**

April 16, 2013 6:30 p.m.

Name	Representing	Phone	Email
Phil Hansen		482-9131	hansenod Qearthlink net
Jack HINCHEN		489-2606	Thinchen @Vericon net
Gail Henchan		489-2606	1( 1/
Duane Barker		527-5274	ddbd96222 gmail.com
LORENZ WORDER	Alb. Bike Coalitum	489-0866	lovenzworden@verizon.net
VIRGINIA HAMMER	PHNA	438-0195	vhammer @amail.com
JOHN VENDETT	ALBANY BICYCLECOALINON	225-4209	hardworkinjohn@ colcom
Alex Waite		518-257-6486	abx cupital agmail. com
JODI SMITS ADADERSONS	PINE HILLS AREA NYUPSTOL USCE	518.229-3215	greenerjsa@qmail.com
Erik Smitz	woolond Hill	518-229-3215	tienshosta amil. com
MAARTEN SMITS	RESIDENT, PINE HILLS	518-229-3034	AUTHORMMS @ GMAIL. COM
VIRGINIA BARBER	RESILENT PINE HILLS	(518)428-3741	VABØZQNYCap.rr. com
PAT DOYLE	mel rose Neighborhand Rounda	0 518-473.3786	pad 6002 chotmael, com
L. Q. Ipert		516-521-7008	alpert, Lauren Egmail.com
K. Sonski	(NEW GOTLAND/WOODLAWN + HELDERBERG	N.A.) 482-7030	
•	AREA RESTORY	/	

# **Public Meeting**

April 16, 2013 6:30 p.m.

Name	Representing	Phone	Email
Dan Shannon	Myself		danielshannon 24@ amail. com
Rorena Bermeio	Albanet citizen		Lberneiz85@gmail.com
Dianne Hansen	myself		hansened e earthlink met
JACKIENER	myself		Mecl Flere yahoo. com
Mike Smith	myself		msmithy ( wyetp, m. com
MATT BROMIRSKI	N'HOOD REJIDENT		matt. bromirskie dot.ny.gov
Jennifer Clifford	Albany Citizen		jennyandscooter @ gmail.com
Rett Schou	citren		bert. 690355 @gmail.com
Gary Hebert	Citizen		GHebert 11@YAHOO. COM
Athena V. Lord	ertigen	482-3652	
	0		





#### Project Goals and Definition

• Evaluate the feasibility of a road diet on Madison Avenue



• Consider bicycles, pedestrians, transit, parking, safety, and passenger vehicle operations

#### **Project Phases**

#### • Phase 1

- Project Initiation
- Existing Conditions
- ✓ Stakeholder Input (July 11, 2012, August 10, 2012)
- Phase 2
  - Alternatives Development
  - Analysis
  - Draft Report
  - ✓ Stakeholder Input (February 28, 2013)
  - ✓ Public Information Meeting
  - Final Recommendations

#### **Stakeholder Input Summary**

- Discussion centered on issues and alternatives
- Comments/questions were received on the following:
  - Pedestrians
  - Cyclists
  - Transit
  - Parking
  - Passenger vehicles
  - Safety

- Draft report and findings
   presented
  - A road diet is feasible on Madison Avenue
  - Support for road diet from stakeholders
  - Preference for the
  - geometrical layout varied



#### **Potential Advantages and Disadvantages**

#### **Advantages**

- Space for bicycles
  Traffic calming/reduced travel speeds
- Less traffic noise
- Crash reduction
  - rash reduction

#### **Disadvantages**

- Increased vehicular delay, notably side-street approaches
- More difficulty turning in and out of driveways
- Increased transit travel times
- Greater interference of double parked vehicles

#### **Critical Success Factors**

- Maintaining the existing curb lines
- Allowing sufficient opportunities for turning vehicles to enter and exit mainline traffic
- Maintain parking on both sides of Madison
   Avenue
- Strive to provide standard lane widths

#### **Existing Roadway Geometry**



#### **Existing Conditions**

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- Intersection bike volumes range from 11 to 23 bikes per hour
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Operational Comparison							
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Accident Benefit	No	Yes	Yes	Yes	Yes		

















# Madison Avenue Traffic Study / Road Diet Feasibility Study Record of Written Comments

No.	Date	Name	Topic
1	4-15-2012	Leah Golby	Stakeholder committee member recommendations
2	5-4-2012	Jay Harold Jakovic	Opposition to road diet on Madison Avenue
3	7-9-2012	Leah Golby	Protected bike lanes
4	1-14-2013	Virginia Hammer	Project status, specifically public involvement
5	3-14-2013	Bert Schou	Education for pedestrians/cvclists
6	3-14-2013	Darren Scott	Bike lane between curb and parking lane
7	3-15-2013	Leslie Dykeman	Definition of road diet, install signals w/ turn lanes
8	3-24-2013	Rita Nolan	Prefer a shared travel lane
9	3-24-2013	Earl Belcher	Prefer a shared travel lane
10	3-25-2013	Jaime Reppert	Options provide inadequate bicycle accommodations
11	4-15-2013	Leah Golby	Existing transit conditions delays to vehicles
12	4-16-2013	Unknown	Prefer option C, separate hike lane
13	4-16-2013	Pat Doyle	Questions about Western Ave and other projects
14	4-19-2013	Lorenz Worden (ABC)	Preference for Alternative 5 Option A (shared travel leng)
			(shared traver lane)
# Alanna Moran

From: William Trudeau [wtrudeau@albany-ny.org]nt: Monday, April 16, 2012 4:34 PM

IO: Leah Golby

Cc: Brendan J. Cox

Subject: RE: Stakeholder Advisory Committee - Madison Avenue

Leah,

Thank you for the information. I have Creighton Manning working on data collection as a top priority item. I am working on space to hold a stakeholders meeting. I spoke with St. Rose this morning about a room for the meeting. They are checking and will let me know availability. I will keep you in the loop as this moves forward.

Bill

William E. Trudeau Jr.

Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Leah Golby [mailto:leah.golby@gmail.com] Sent: Sunday, April 15, 2012 7:25 AM William Trudeau Brendan J. Cox Subject: Stakeholder Advisory Committee - Madison Avenue

Dear Bill,

I think you made Virginia Hammer's week with the news of the contract award for Madison Avenue-- she was so thrilled that the contract has been awarded and she's been very impressed with Creighton Manning from the research that she's conducted.

The list of a Stakeholders Advisory Committee that the neighbors and I came up back when we started thinking about this is below. I have the feeling it may be more stakeholders than you were hoping for, but when I tried to come up with people who should be eliminated, I couldn't! I actually added Hudson Park Neighborhood Association and removed Center Square Neighborhood Association because Hudson Park is the NA that includes Madison Avenue -- Center Square is further north...we must have been mistaken when we came up with our original list.

FYI... my availability right now during the day on weekdays is limited at least through May. The earliest I could make a meeting is 4:30, and I'd really like to be able to be there!

# Stakeholder Advisory Committee

- The College of St. Rose
- Albany Medical Center
  - olumbia Development Corporation

- Price Chopper - Vice President William \_\_\_\_\_ (He is well-versed in traffic-related stuff, maybe you have worked with him -- we do have his name someplace, but need to look it up)

- UAlbany Transportation Department
- CDTA

4/26/2013

Page 2 of 2

- Albany School District Transportation Dept.
- CC Members who represent 6th, 10th, 11th, 13th and 14th Wards
  Park South, Pine Hills, Washington Park, and Hudson Park Neighborhood Assns. Lark Street BID
- Albany Bicycle Coalition
- City of Albany FD, PD, Dept. of Planning and Development, and Dept of General Services.

--Leah Golby 10th Ward Council Member 550 Myrtle Avenue Albany, NY 12208

Cell: 518.209-1244 Home: 518.438-1244 <u>leah.golby@gmail.com</u> Follow me on <u>Twitter</u>

JAY HAROLD JAKOVIC Attorney and Counselor at Law 662 Madison Avenue Albany, New York 12208-3645

Telephone: (518) 465-6537 Fax: (518) 465-6566

May 4, 2012

William Trudeau Albany City Coordinating Traffic Engineer 10 North Enterprise Drive Albany, New York 12204

Re: Madison Avenue Traffic Calming

Dear Mr. Trudeau:

Pursuant to our conversation of today's date, this letter will transmit to you for forwarding to the firm conducting the feasibility study of reducing the lanes on Madison Avenue my letter of September 28, 2010 directed to Mayor Gerald Jennings. As you can see, the letter details my experiences of over 60 years living on Madison Avenue, 44 years of driving and my opinions about the lane reduction.

Thank you. Very truly yours, Jay Harold Jakow JHJ/sbc Enc.

JAY HAROLD JAKOVIC Attorney and Counselor at Law 662 Madison Avenue Albany, New York 12208-3645

Telephone: (518) 465-6537 Fax: (518) 465-6566

September 28, 2010

Hon. Gerald D. Jennings Mayor of the City of Albany City Hall, Room 102 24 Eagle Street Albany NY 12207

RE: Resolution of the Albany City Common Council supporting Traffic Calming on Madison Avenue, Resolution No. 96.92.10R

Dear Mayor Jennings:

This letter is written you in opposition to the so-called "Madison Avenue Traffic Calming Resolution" in Albany, New York, which I understand will narrow the carriage way in Madison Avenue by eliminating one lane of traffic in each direction. I have maintained a residence on Madison Avenue for nearly sixty years and an office there for nearly twenty-five. I have observed the traffic and the conditions on the street and based on my experience, I believe very strongly that the proposal is misguided and will not make the street safer, rather it will increase the risk of accidents and injuries to property and persons utilizing the road.

I have seen that most drivers use the inside two lanes to drive down the street to pass through the area. The outside two lanes tend to be occupied by busses and cars that pick up and discharge passengers and/or loads as well as by double-parked vehicles. Examples of vehicles that double park almost daily are busses, the postman, the UPS truck and FedEx truck. Private trash haulers, the City trash removal and recycling vehicles as well as the medical waste pick-up company double park weekly.

If traffic is reduced to one lane, the vehicles enumerated above will either cause traffic to come to a complete standstill or will cause drivers to divert into the common center turn lane where the risks of a head-on collision are increased exponentially. Furthermore, the second lane of traffic allows drivers entering the carriage way from private driveways to inch out into the lesser used and slower lane of traffic to see around parked cars. Without this second lane of traffic, the driver will be inching out into main flow of oncoming traffic. This problem cannot be treated lightly. Madison Avenue is a tightly parked street. I can tell you that cars park right up to my driveway on both its sides even though there a fire hydrant on the east side of my driveway and frequently the cars are packed so tight that I am unable to turn east

when exiting the driveway without crossing into the westbound lane, forcing me to go west and around two blocks (Morris Street is westbound only) when I intend to travel east. Also, I can tell you that when the vehicle parked next to my driveway has a sun screen in it, all I can see when exiting the driveway is a blank wall and when the vehicle is an SUV, as it frequently is, all I can see is a radiator grill until I enter the outside lane. Your plan will force me blind into oncoming traffic with no space for it to divert. Furthermore, one must not think that the single turning lane will be a satisfactory substitute for the two outside lanes. While cars traveling westbound can access my driveway from the turning lane located on the south side of the street, those traveling eastbound cannot. Eastbound vehicles accessing my driveway must straddle both the inside and the outside lanes because the cars are so closely parked to it. If the second lane of traffic is eliminated, this extra turning radius will be denied and there can be no diversion around vehicles turning into driveways on the same side as the flow of traffic. I must tell you that in the recent past, my requests for parking set back markers from my driveway have been refused by the Department of General Services.

Closely parked vehicles are a problem, but far worse is the blocked driveway. It is at least a monthly occurrence for me to find a car parked across my driveway or one parked in it to go to a building elsewhere on the block. Cars that park in the driveway never pull up to allow a car to park behind them; rather the offender parks so that another driver cannot pull in behind. The offender parks this way because the offender does not want to be blocked in. You should know that about once a month I find myself sitting in my car in Madison Avenue sounding the horn for somebody to move their vehicle from across my driveway or from out of it. My experience is that I will sit sometimes as long as 15 to 20 minutes while the offender takes groceries into a building on the block, comes out from a friend's apartment or cars to be left in my driveway by others for hours at a time. I can see sitting in the center turn lane when approaching on the opposite side of the street, but where am I going to sit when I am on my own side? Do you expect me to block traffic or sit in the center turn lane and cut across traffic when access to my driveway is finally given? I am not parking elsewhere and walking, period; my octogenarian Mother cannot.

The outside two lanes on Madison Avenue also provide additional parking during snowstorms and their cleanup. I can remember back into the 1950's and from then to the present during every winter storm and its aftermath, some cars are left snowbound in the parking lane while other cars park inside them in the outside travel lanes until the cars in the parking, which during snowstorms is bad enough already, will be further reduced. In addition, the outside lane provides additional space for cars in winter because the plows cannot clear to the curb. Consider Morris Street where the carriageway shrinks demonstrably after repeated snowfalls because of snow banks at the curbs. The shrinkage is so bad that I do not use the Morris Street entrance to my carriage house; rather in winter, I use my mother's Madison Avenue driveway.

I submit that there is nothing appealing about the proposal to decrease the carriageway on Madison Avenue; that it will not increase safety, rather it will increase the inconvenience and hazards in using the road. In short, the proposal is misguided. Please remember that

Madison Avenue is not some paved over rural cow path. It is Route 20, the Boston to Buffalo Road which Western Avenue east of South Allen Street is not.

I thank you for your consideration of my lefter in opposition and I remain,

Vety truly yours, ł alluc Jay Harpld Jakovic Sbc-

From: Jeffrey Pangburn

nt: Wednesday, July 11, 2012 12:42 PM

IO: Mark Sargent; Alanna Moran

Subject: FW: fyi -- some thoughts on protected bike lanes

Jeff Pangburn, P.E. Senior Project Manager

From: William Trudeau [mailto:wtrudeau@albany-ny.org] Sent: Monday, July 09, 2012 1:53 PM To: Jeffrey Pangburn Subject: Fwd: fyi -- some thoughts on protected bike lanes

Just looked at the email below when I got outside. I intend to talk with Councilmember Golby about her comment.

Sent from my Verizon Wireless 4G LTE smartphone

------ Original message ------<sup>^</sup> ·bject: fyi -- some thoughts on protected bike lanes ...om: Leah Golby To: William Trudeau CC: "Brendan J. Cox", Kathleen Bronson

Hi Bill,



From a couple of casual conversations that I've had with some of the individual stakeholders of the Madison Avenue road diet study, I wanted to be sure that you know before our meeting Wednesday that there is a very strong interest from a couple of the people I've spoke with that the Madison Ave project look very seriously at "protected bike lanes."

Personally, I would welcome protected bike lanes in Albany because I think it's the next step to getting more people to use bicycles in the city. I have so many conversations with people who are curious about bicycling or who want to take up bicycling, but they are terrified of riding along with traffic.

Below are a few articles about protected bike lane projects and proposals in other parts of the country.

Best, Leah

Bikes Belong - Green Lane (Protected Bike Lane) project: <u>http://www.bikesbelong.org/news/bikes-belong-launches-project-for-protected-bikeways-green-lane-project/</u>

Chicago and other cities tracking usage of protected bike lanes "Green lanes" project: <u>http://www.suntimes.com/news/transportation/12891660-418/chicago-among-six-cities-named-models-for-dedicated-bike-lanes.html</u> -- Austin story on Green Lanes project -- states, "In Washington, D.C., bicycle volume tripled after protected lanes were installed. In Portland, Ore., more than 70 percent of survey respondents said bicycling is easier and safer with these dedicated lanes, while motorists said the facilities did not make driving any slower or less convenient." Story 're: <u>http://www.bizjournals.com/austin/news/2012/06/01/austin-getting-more-protected-bike-lanes.html</u>

# Of course, any project is never without dissent/ controversy:

-- recent story on Lincoln, NE considering protected lanes: <u>http://journalstar.com/news/local/govt-and-politics/council-hears-conflicting-views-on-protected-bike-lane/article\_aab9510f-9227-5d41-b488-45273fe37805.html</u>

--Leah cell: 518 209-1244

Have **you** "Liked" Pat on <u>Facebook</u> yet? <u>Click here</u> to donate now and help to get Pat's message out to voters!

Friends of Patricia Fahy PO Box 8282 Albany, NY 12208

#### funding for the project.

I would like to clarify the issue of the funding for the feasibility study itself. We did not utilize any of the funds that were secured from private funders. The cost of the feasibility study falls completely under the City's 2012 capital projects budget. I

laud everyone who secured the private funding and I have no doubt we will need that to continue to move forward.

I hope this clarifies everything. I once again apologize for any miscommunication. I look forward to seeing everyone at the stakeholders meeting.

Thanks, Brendan

From: Virgina Hammer [mailto:vhammer@gmail.com]
Sent: Monday, January 14, 2013 4:57 PM
To: Brendan J. Cox
Cc: William Trudeau; Leah Golby; Todd Hunsinger; Leif Engstrom; Richard Conti; Carolyn McLaughlin
Subject: Madison Avenue Traffic Calming Feasibility Study



Dear Asst. Chief Cox,

I am writing to inquire about the status of the Madison Avenue Traffic Calming Feasibility Study. According to the contract with the consultant, the following was agreed to:

a. Periodic stakeholder representatives meetings to be held during the project timeline.

b. Contractor will "schedule, attend, and conduct two public informational meetings. One meeting at the beginning of the project and one meeting at a later period in the progress of the project".

C Term of the Agreement: "This Agreement shall commence on April 1, 2012 and terminate on October 31, 2012".

Please let me know:

a. Why there was only one stakeholder representative meeting held?

b. Why were no public informational meetings held?

c. Assuming that the deliverables met the October 31, 2012 deadline, why is the study still not public, 90 days after it was delivered to the city.

d. Where is the study, and when will it be available?

Just a reminder, that this study was supported not only by taxpayer funds, but also by the following organizations: College of St. Rose Price Chopper Columbia Development Corp. Albany Medical Center CANA As you know, the Albany Common Council passed a resolution in support of this study. I am sure that they, along with all the other taxpayers and neighborhood associations who fover it are environment environment of the second state of the sec

with all the other taxpayers and neighborhood associations who favor it are anxiously awaiting the consultants' recommendations. Hope to hear from you soon.

Virginia Hammer <u>VHammer@gmail.com</u> 52 S. Allen St., Albany, NY 12208 518-438-0195

...

From: William Trudeau [wtrudeau@albany-ny.org]

S Friday, March 15, 2013 3:50 PM

To: Mark Sargent; Jeffrey Pangburn

Subject: FW: Madison Road Diet Public Meeting 3/25/13

Mark & Jeff,

See Bert Schou's comment below regarding the pedestrian in the image on the flyer. We can talk and should have a response for when Bert brings this up. No big deal for me. I will also speak with Bert when I see him.

Bill

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Kate Lawrence [mailto:LawrenceK@ci.albany.ny.us] Sent: Friday, March 15, 2013 10:48 AM To: William Trudeau Subject: FW: Madison Road Diet Public Meeting 3/25/13

Hi Bill,

Here is a relevant comment from Bert Schou regarding the cover image for the Road Diet report.

Best,

Kate Lawrence, Planner Department of Development and Planning City of Albany 21 Lodge Street, Albany, NY 12207 P: (518) 434-2532 x 17 F: (518) 434-9846 E: lawrencek@ci.albany.ny.us

From: Bert [mailto:bert.090355@gmail.com] Sent: Thursday, March 14, 2013 3:27 PM To: Kate Lawrence Subject: Re: Madison Road Diet Public Meeting 3/25/13



PS Did you notice the woman on the cover of the report crossing Madison has a cell phone to her ear? Education is also key for whatever improvements are made and I see way to many pedestrians and drivers using phones when they should be paying attention to the road/traffic. On Thu, Mar 14, 2013 at 1:13 PM, Kate Lawrence <<u>LawrenceK@ci.albany.ny.us</u>> wrote:

Dear all,

As you may know, the City of Albany has prepared a draft traffic study that evaluates the feasibility of implementing a road diet along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. Public comments are being solicited, and you are invited to join the City's study team at either meeting time to hear an overview of the study and to provide your input on the draft findings.

Attached please find a copy of the meeting flyer, as well as a copy of the draft report and a document outlining the study recommendations and road striping options.

If you have any questions, please contact Bill Trudeau, Coordinator of Traffic Engineering, at (518) 434-5791 or MadisonAveStudy@albany-ny.org

Best,

Kate Lawrence, Planner Department of Development and Planning City of Albany 21 Lodge Street, Albany, NY 12207 P: (518) 434-2532 x 17 F: (518) 434-9846 E: lawrencek@ci.albany.ny.us



Sumal Ability

#### **Mark Sargent**

From: William Trudeau [wtrudeau@albany-ny.org]

S Friday, March 15, 2013 3:54 PM

To: Mark Sargent; Jeffrey Pangburn

Subject: FW: Madison Road Diet Comments

Attachments: 201303141828.pdf

Comments are coming in fast and furious. As we have been doing, just keep these in the file.

Have a good weekend.

Bill

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Kate Lawrence [mailto:LawrenceK@ci.albany.ny.us] Sent: Friday, March 15, 2013 9:24 AM To: William Trudeau Subject: Madison Road Diet Comments

Η.

Here are some comments (and an attached diagram) from Darren Scott at Albany Housing Authority.

Best,

Kate Lawrence, Planner Department of Development and Planning City of Albany 21 Lodge Street, Albany, NY 12207 P: (518) 434-2532 x 17 F: (518) 434-9846 E: <u>lawrencek@ci.albany.ny.us</u>



Energy. Sustainsbillity

From: Scott, Darren [mailto:DScott@albanyhousing.org] Sent: Thursday, March 14, 2013 6:41 PM To: Kate Lawrence Subject: FW: Madison Road Diet Public Meeting 3/25/13

Hi Kate – could you consider the attached lane configuration? The parked cars would buffer the cyclists from the moving traffic. I've seen it work in Manhattan to good effect.

Thanks.

Darren J. Scott, AICP



Albany Housing Authority 200 South Pearl Street Albany, NY 12202 Phone: (518) 641-7536 Fax: (518) 641-7545 E-mail: <u>dscott@albanyhousing.org</u>

From: JOANN MORTON [mailto:ba0jbm@hotmail.com] Sent: Thursday, March 14, 2013 5:42 PM Subject: FW: Madison Road Diet Public Meeting 3/25/13

**Best Regards** 

JoAnn

From: <u>LawrenceK@ci.albany.ny.us</u> Subject: Madison Road Diet Public Meeting 3/25/13 Date: Thu, 14 Mar 2013 17:13:33 +0000

Dear all,

**On March 25, 2013** there will be two public meetings to discuss the findings of the Madison Avenue Traffic Study/Road Diet Feasibility Study. There will be a meeting at 11:00 AM and another at 6:30 PM. They will be held at the Touhey Forum in the Lally School of Education at the College of Saint Rose, 1009 Madison Avenue, Albany, NY. The content is the same for both meeting times, so <u>please plan on attending only one</u>.

As you may know, the City of Albany has prepared a draft traffic study that evaluates the feasibility of implementing a road diet along Madison Avenue from Lark Street to South Allen Street and along Western Avenue from South Allen Street to Manning Boulevard. Public comments are being solicited, and you are invited to join the City's study team at either meeting time to hear an overview of the study and to provide your input on the draft findings.

Attached please find a copy of the meeting flyer, as well as a copy of the draft report and a document outlining the study's recommendations and road striping options.

If you have any questions, please contact Bill Trudeau, Coordinator of Traffic Engineering, at (518) 434-5791 or MadisonAveStudy@albany-ny.org

Best,

Ka awrence, Planner
Department of Development and Planning
City of Albany
21 Lodge Street, Albany, NY 12207
P: (518) 434-2532 x 17



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From: William Trudeau [wtrudeau@albany-ny.org]

S · Friday, March 15, 2013 4:50 PM

To: Jeffrey Pangburn; Mark Sargent

Subject: FW: ROAD DIET?

And they just don't stop.....

We can talk next week about these by phone and how we should/if we should respond.

Bill

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Kate Lawrence [mailto:LawrenceK@ci.albany.ny.us] Sent: Friday, March 15, 2013 4:42 PM To: William Trudeau Subject: FW: ROAD DIET?

Kate Lawrence, Planner Department of Development and Planning City of Albany 21 Lodge Street, Albany, NY 12207 P: (518) 434-2532 x 17 F: (518) 434-9846 E: <u>lawrencek@ci.albany.ny.us</u>



Enerry Sustainability

From: leslie dykeman [mailto:ledykeman@yahoo.com] Sent: Friday, March 15, 2013 4:39 PM To: Kate Lawrence Subject: ROAD DIET?



to those of us in the non planning/ non transportation, non engineering community - the term ROAD DIET is not clear

the brochures are well designed and complete with regards to information b' ROAD DIET is not a household term.

I happen to know what you actually want to do (make a middle lane that will have two arrows to use when you want to turn into a sidestreet or a

William Trudeau [wtrudeau@albany-ny.org] From:

Sr 1: Monday, April 15, 2013 11:01 AM

Τu. Mark Sargent; Jeffrey Pangburn

Subject: FW: Madison Avenue Traffic Calming Study

Here is another one.

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Rita Nolan [ritamnolan@yahoo.com] Sent: Sunday, March 24, 2013 3:46 PM To: Madison Ave. Study Subject: Madison Avenue Traffic Calming Study

Dear All,

I am so glad that this study will finally be implemented.

As a cyclist, I believe that the safest choice for bikes is usually a dedicated lane but I don't think that there is the space for that on Madison Avenue. So in this situation, I would prefer a Shared Lane. Prufer and

I wish I could be at the meeting.

Rita Nolan

#### Mark Sargent

From: William Trudeau [wtrudeau@albany-ny.org]

Sr Monday, April 15, 2013 11:00 AM

To: Mark Sargent; Jeffrey Pangburn

Subject: FW: [Albany Bicycle Coalition] Your Thoughts on Madison Avenue Traffic Calming

Items from the Madison Ave Study email account.

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Earlslb [earlslb@aol.com]
Sent: Sunday, March 24, 2013 3:42 PM
To: Madison Ave. Study
Subject: [Albany Bicycle Coalition] Your Thoughts on Madison Avenue Traffic Calming

Lorenz,



Sorry I won't be able to make the meetings tomorrow, I will be in Syracuse all day.

I'm choosing A – Shared TRAVEL Lane (i.e., "sharrows" as on Western Ave. and elsewhere in the city).

Sincerely, Earl Belcher From: William Trudeau [wtrudeau@albany-ny.org]

S Monday, March 25, 2013 2:42 PM

To: Jeffrey Pangburn; Mark Sargent

Subject: FW: Madison Avenue Road Diet Report

Some light reading below from an individual who has all of our Madison Ave troubles solved.

Enjoy,

Bill

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Jaime Reppert [mailto:jaime.reppert@qmail.com] Sent: Monday, March 25, 2013 1:56 PM To: weiss.bee@mindspring.com Cc: Kate Lawrence; Lorenzworden@verizon.net; savageanne@gmail.com; cgaliva1@nycap.rr.com; vhammer@gmail.com; stoneman@nycap.rr.com S' >ct: Madison Avenue Road Diet Report

The following message by me was composed after reading the report forwaded by LWeiss from a message she received from Kate Lawrence (see email thread below). Thanks for sending it ladies!

Jaime

The options presented are slight variations on one suboptimal alternative. The options are not significantly different from one another. Without adequate justification, it appears that this study has discarded the most viable alternatives. The center turning lane gives too much primacy to infrequent turning movements. It will make Madison Avenue look and function *more* as a highway than the existing four-lane configuration does. The center of the street is reserved for automobiles only. Therefore the narrowing proposed with a center lane:

• does not achieve a traffic calming effect. Instead it encourages automobile speed with the expectation of free flow bypassing turning vehicles. The faster speeds discourage bicycle use, thus subverting efforts to accommodate bike riders.

does not narrow the street enough to provide easy pedestrian crossing.

• precludes the opportunity to increase on-street parking, and further reduce traffic speeds, by using angled parking stalls that could be achieved if the road were narrowed to two lanes only with no center lane.

scrunches bicycle lanes into inferior width afterthoughts rather than providing for a safe barrier-separated bike lane.

• adds new paint markings and signs for the center lane that create a highway feel like Western Avenue west of Alban

• misses opportunities for new plantings, pedestrian refuges, and reduced traffic control signage and lane markings the could transform Madison Avenue from a highway to a neighborhood street

Why not consider getting rid of the center lane and make Madison Avenue two lanes only for automobiles? That wi slow traffic slightly by creating minor turning movement interruptions in the flow. Two lanes with no center lane are easy for pedestrians to cross, even without slowed speed limits. Lower the speed limit to 15 mph and minor interruptions of automobile traffic flow will be virtually non-existent because turning movements are easily executed using speeds at or near the posted speed limit and drivers can anticipate and react better. So cars can and will follow more closely without incident. This increases the road capacity so that greater volumes of vehicles can be accommodated than are provided for in the "options" that each require a center turning lane. The turning lane options have less capacity because they support faster speeds of 30 mph+ in the through travel lanes, therefore increasing the following distance for vehicles and reducing the volume of vehicles that can be accommodated in the same linear distance of roadway. The higher speeds in the through lanes that are encouraged by the center turning lane also increase hazards for bicyclers, and jaywalking pedestrians, which discourages mixed travel modes. The center turn lane introduces new midblock head-on collision hazards which are otherwise offset in a two lane alternative..

If the folks controlling the Madison Road Diet project outcomes have eliminated the two lane narrowing alternatives with no center turning lane because they believe that two lanes along with reduced posted speed limits will not work, it can be easily proved or disporved by using traffic control cones, barrels, or sawhorse barriers to temporarily create two lanes with no center turning lane, Use the opportunity for direct observation of live real-time conditions for two-lane-only tr  $_1$ , with posted speed limits of 15 mph. This trial may help to give insights regarding expected or novel driving behaviors during peak traffic volumes.

Compare with Western Avenue in the same neighborhood, where there are no significant delays from turns on this twolane street or lower Madison Avenue east of Lark Street where there are also no *significant* delays on the two-lane street, even during rush hour.

Manning Blvd between Western and Washington suffered the same missed-opportunity fate by creating a useless center lane instead of really narrowing the street to two lanes and taking that center space away from automobiles. Autos are encouraged to drive faster instead of using speeds appropriate to the residential neighborhood, and the road space in the center turning lane is almost completely unutilized.

From: Kate Lawrence [mailto:LawrenceK@ci.albany.ny.us] Sent: Tuesday, March 19, 2013 11:30 AM Subject: Change of Date - Madison Road Diet Public Meeting 4/16/13

## Dear all,

Due to a conflict with the Passover holiday, the public meetings on the Madison Avenue Traffic Study/Road Diet Feasibility Study have been **rescheduled to Tuesday**, April 16, 2013. There will be two public meetings; one at 11:00 AM and another at 6:30 PM. They will be held at the Touhey Forum in the Lally School of Education at the College of Saint Rose, 1009 Madison Avenue, Albany, NY. The content is the same for both meeting times, so <u>please plan on attending only one</u>.

A. hed please find a copy of the new meeting flyer, as well as a copy of the draft report and a document outlining the study's recommendations and road striping options.

# If you have any questions, please contact Bill Trudeau, Coordinator of Traffic Engineering, at (518) 434-5791 or

## MadisonAveStudy@albany-ny.org

#### Best,

Koto Lawrence, Planner tment of Development and Planning D City of Albany 21 Lodge Street, Albany, NY 12207

P: <u>(518) 434-2532 x 17</u> F: <u>(518) 434-9846</u> E: lawrencek@ci.albany.ny.us ALBANY Energy Suntainability Madison Recc & Options Poster\_2.28.13.pdf Madison DRAFT Report 2.15.13 .pdf 4.16.13 Madison Public Mtg flyer.pdf

From: William Trudeau [wtrudeau@albany-ny.org]

Sr 😁 Monday, March 18, 2013 10:45 AM

To. Jeffrey Pangburn

Subject: FW: ON PASSOVER!!!???? Madison Road Diet Public Meeting

FYI

From: Kate Lawrence [mailto:LawrenceK@ci.albany.ny.us]
Sent: Monday, March 18, 2013 8:53 AM
To: L. E. Weiss
Cc: Virgina Hammer; William Trudeau
Subject: RE: ON PASSOVER!!!???? Madison Road Diet Public Meeting

Dear Ms. Weiss,

I am forwarding your comments on the meeting date to Bill Trudeau, Coordinator of Traffic Engineering for the City of Albany, who is the contact for this project.

Best,

Kate Lawrence, Planner Department of Development and Planning City of Albany 21 Lodge Street, Albany, NY 12207 P: '<sup>-1</sup>8) 434-2532 x 17 F: (...8) 434-9846 E: lawrencek@ci.albany.ny.us

ALBANY

From: L. E. Weiss [mailto:weiss.bee@mindspring.com]
Sent: Friday, March 15, 2013 6:08 PM
To: Kate Lawrence
Cc: Virgina Hammer
Subject: ON PASSOVER!!!???? Madison Road Diet Public Meeting

I'm sorry to be rude, but I absolutely cannot believe my eyes when I see the date of this long-awaited public meeting. March 25th is the first night of Passover and it is outrageous to schedule any public business that day--unless, of course, you schedule a second session for the morning of Easter Sunday. Yes, you've scheduled a session during the day, but those who work will likely not be able to attend, and those who have taken the day off in order to prepare for Seder will not be attending. I am tired of conferences and workshops and important meetings being scheduled in ignorance of major Jewish religious holidays.

Please take note and reschedule this session.

L' aine Weiss

## **Mark Sargent**

From: Mark Sargent

S Monday, April 15, 2013 3:34 PM

- To: 'William Trudeau'
- Cc: Jeffrey Pangburn

Subject: FW: Madison Traffic Calming questions/ feedback

Bill – See if you agree with these responses for Leah.

From: William Trudeau [mailto:wtrudeau@albany-ny.org]
Sent: Monday, April 15, 2013 10:59 AM
To: Mark Sargent; Jeffrey Pangburn
Subject: FW: Madison Traffic Calming questions/ feedback

I need to respond to Leah today. Give me a call when you have time to formulate a response that we all agree with.

Bill

William E. Trudeau Jr. Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Leah Golby [mailto:leah.golby@gmail.com] Sent: Monday, April 15, 2013 8:40 AM To: William Trudeau Cc: Brendan J. Cox Subject: Madison Traffic Calming questions/ feedback



Hi Bill,

Here are some questions/ feedback that I've been meaning to ask the consultants about the study.

1. Feedback to Alta Planning: In their memo dated July 6, 2012, they state in 1.3 that there are several new bus stops with <u>shelters</u>, signage, bike racks and good access. I walk that strip of Madison regularly, and the only shelter that I'm aware of is <u>one</u> at the westbound intersection at Washington Park/ New Scotland Ave. I'm pretty sure there are no other shelters (or am I wrong?). Access is variable -- and it is rare that there is bike parking at any of the Madison Ave bus stops, if there is any at all. Although Alta did a field walk, they did not do a detailed inventory of all existing assets in the corridors. Their summary appears overly generalized in the report.

2. I recall during the stakeholders meeting that one of the drawbacks of implementing traffic calming would be longer wait times for motorists from side streets and driveways. Since this will impact virtually all 10th ward residents and many other folks using our roads, could they please elaborate on this drawback, specifically:

• From a driveway during peak traffic time, what would the estimated wait time be? (are there ways to help address this via signal coordination at peak times). This is difficult to estimate because wait times will be different at different locations and at different times of

day. With all of the through traffic volume in one lane versus two, it is expected that delays will marginally increase.

- During peak times, what is the percent of cars exiting driveways? Unknown. The study did not count individual driveways. Residential driveways have approximately 65 percent entering and 35 percent exiting during the PM peak hour.
- In terms of intersections, since every intersection in the corridor is signaled, wouldn't this only impact those makir "right on red" turns? Not necessarily as the traffic signals will be timed differently to provide more green time to Madison Avenue, which will increase delays on side streets for all cars, not just right-turns-on-red.
- Figuring in signaling optimization, what would the estimated wait time be for someone trying to turn from an intersection onto Madison Avenue? (An explanation with multiple scenarios would be welcome...for instance: likelihood of making a safe right on red, wait time for light, anything that I'm forgetting...) There is a lot of variability here, but we are estimating approximately 16 or 17 seconds of additional side street delay on average. So if someone waits about 24 seconds today, they will wait about 40 seconds after the road diet project.

I think that's it (for now!)... I will see you tomorrow for the morning meeting, since for the evening meeting, I will be attending the Community Policing forum.

As always - thanks for your help!

Best,

Leah

Leah Golby 10<sup>-</sup> Ward Council Member 55. Myrtle Avenue Albany, NY 12208

Cell: 518.209-1244 Home: 518.438-1244 <u>leah.golby@gmail.com</u> Follow me on <u>Twitter</u> "Like" me on <u>Facebook</u>

# Alanna Moran

From: William Trudeau [wtrudeau@albany-ny.org]

**ht:** Tuesday, April 16, 2013 3:55 PM

To: Mark Sargent; Jeffrey Pangburn

Subject: FW: forwarding a comment from someone who can't make the meeting

FYI

# William E. Trudeau Jr.

Coordinator of Traffic Engineering City of Albany Traffic Engineering 10 N. Enterprise Drive Albany, New York 12204 Phone (518) 434-5791 Fax (518) 434-4315

From: Leah Golby [mailto:leah.golby@gmail.com]
Sent: Tuesday, April 16, 2013 2:44 PM
To: William Trudeau
Subject: forwarding a comment from someone who can't make the meeting



Hi Bill, see below -- there may be a couple more coming too.

Leah,

I will be unable to make either of the Madison ave. road diet feasibility study meetings. However in looking at the diagram, I vote for option C where bikes and parked cars have their own distinct lanes.

ht now, there is not a DISTINCT lane for bikes and it greatly startles me when a bike whizzes up on my right unexpectedly!

Don't know which option you like best, but if you've heard from others that echo what I am saying, then please represent that to the Council.

Thanks, as always!!!

Leah Golby 10th Ward Council Member 550 Myrtle Avenue Albany, NY 12208

Cell: 518.209-1244 Home: 518.438-1244 <u>leah.golby@gmail.com</u> Follow me on <u>Twitter</u> "Like" me on <u>Facebook</u> From: Pat Doyle [mailto:pad6002@hotmail.com] Sent: Tuesday, April 16, 2013 9:43 PM William Trudeau bject: St. Rose meeting

ADJECT ST. KOSE MEETIN



Hello Mr. Trudeau,

Tonight's meeting was so interesting and I'm glad I attended.

In addition to the Madison Ave. project, I was very happy to hear that there will be traffic signal work done on Western.

The Melrose Neighborhood Assn. is meeting on Monday, April 29 and I would be happy to provide attendees with information about this project.

Please remind me which part of Western is affected, what decisions have already been made and which decisions residents might be able to give suggestions about. Also are you planning presentations at neighborhood meetings? Or should people provide comments via the email address <u>MadisonAveStudy@albany-ny.org</u>

Thank you. Pat Doyle

PS I appreciate your team's quick response to report of traffic lights out which I report when I see them.

#### Alanna Moran

From: Stephan Godlewski
Int: Friday, April 19, 2013 8:06 AM
To: Alanna Moran; Jeffrey Pangburn; Mark Sargent

Subject: FW: [New post] Pine Hills Embraces Option 5A

From: Stephan Godlewski [mailto:swgodlewski@gmail.com] Sent: Friday, April 19, 2013 8:01 AM To: Stephan Godlewski Subject: Fwd: [New post] Pine Hills Embraces Option 5A

------ Forwarded message ------From: Albany Bicycle Coalition <<u>comment-reply@wordpress.com</u>> Date: Fri, Apr 19, 2013 at 7:57 AM Subject: [New post] Pine Hills Embraces Option 5A To: <u>swgodlewski@gmail.com</u>

Respond to this post by replying above this line

New post on Albany Bicycle Coalition

# Pine Hills Embraces Option 5A by Lorenz Worden



(After the City of Albany's <u>recent public meeting</u> on the Madison Avenue Traffic Calming study, the **Pine Hills Neighborhood Association** put forth the following statement in support of Traffic Calming. Some slight editorial changes made by ABC. This statement seems consistent with opinions expressed by many at the April 16, 2013 presentation.)

The Pine Hills Neighborhood Association's strong preference is for Alternative 5, which includes both restriping from 4 to 3 lanes (including a turn lane) <u>AND</u> traffic signal coordination. The association believes that both components must go together in order to produce a design that has the best chance of being funded. In terms of options, we also support <u>Option A</u>, which calls for sharrows [shared lane bicycle markings].

We understand that the next stage of this road diet project includes Phase 3 (design phase). In anticipation of the Albany Common Council's passing of its Complete Streets legislation, would it not make sense for Phase 3 to include an entire Complete Streets design for Madison Avenue? Having a fully worked out plan for Madison Ave. will put Albany in a good position to apply for grants that are earmarked for Complete Streets and other public safety transportation funds.

In anticipation of getting to this point in the process, we approached our NYS representatives a couple of years ago about implementation funds. Once we have a design, we will remind them of their support and commitment. We will continue to work with state and federal agencies to advocate for funds necessary to make Madison Avenue safer for all users.

Lorenz Worden | April 19, 2013 at 7:57 am | Categories: Article | URL: http://wp.me/pmNrn-Yl

Comment See all comments

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